

UNIVERSITY OF ALBERTA

STUDENT-FACULTY INFORMAL INTERACTION: A CRITICAL APPROACH

BY

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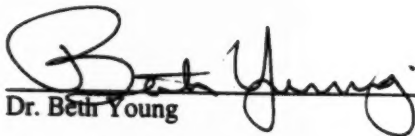
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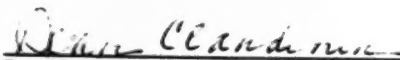
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled STUDENT-FACULTY INFORMAL INTERACTION: A CRITICAL APPROACH submitted by Laurie Mook Schugurensky in partial fulfillment of the requirements for the degree of MASTER OF EDUCATION in INTERNATIONAL/INTERCULTURAL EDUCATION.


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ABSTRACT

This study explores the participation of undergraduate students in different types of informal student-faculty interaction: academic, social, emotional and remedial. The profile of interactors and non-interactors is determined using empirical data from a US national survey, and trends are analyzed from a critical perspective. The study also examines four institutional programs which enhance student-faculty interaction.

Gender, major, ethnicity, GPA, SES and self-ratings all had an impact on the degree of participation of students in informal interaction with professors. Different student groups interact in different ways with faculty, and programs encouraging student-faculty interaction tend to specialize in a particular type of interaction. Some student groups are overrepresented in some programs and underrepresented in others. Males are overrepresented in academic interaction, while females and subordinate minorities are overrepresented in remedial and emotional interactions. Disadvantaged groups are less likely to engage in informal academic interaction, which in turn reinforces their position of disadvantage.

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LIST OF ABBREVIATIONS

- AAP:** Academic Advancement Program
- BA:** Below Average
- CIRP:** Cooperative Institutional Research Program
- D12S:** Dinner for 12 Strangers
- FIR:** Faculty in Residence
- SFII:** Student-Faculty Informal Interaction
- HERI:** Higher Education Research Institute
- GMP:** Graduate Mentor Program
- GPA:** Grade Point Average
- NSF:** National Science Foundation
- SRP:** Student Research Program
- UCLA:** University of California at Los Angeles
- URM:** Underrepresented Minority
- URDS:** Undergraduate Research Development Stipend

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction

The impact of student-faculty relationships on higher education students has been the object of numerous studies. Most research in this area has confirmed the hypothesis that a close student-faculty relationship positively affects academic achievement, students' occupational decisions and educational aspirations, institutional persistence, intellectual and personal development, academic and non-academic satisfaction, and attitudes toward college (see for instance, Pascarella 1980; Romanski 1987; Pascarella & Terenzini 1991; Kwong 1991).

Professors and undergraduate students can engage in two main kinds of interaction: inside the classroom and outside the classroom. The latter, which is also called informal interaction, constitutes the focus of this thesis. Informal interaction includes a wide variety of situations ranging from talking during office hours to participating on a research project, having a coffee in the college cafeteria, or being a guest in a professor's home.

Although the literature on this topic is relatively vast, there are at least three issues that have not yet been sufficiently addressed. First, as several authors point out (see Endo & Harpel 1981; Pascarella 1985; Kwong 1991; Lampert 1993), there are very few studies on the specific dynamics of this relationship. Second, and in my view just as important, there is almost no literature on the social and personal characteristics of those students who are included and excluded from these interactions, and about the mechanisms of inclusion and exclusion. Third, there is a

relative absence of studies on programs developed by higher education institutions to promote (either directly or indirectly) student-faculty interaction. These last two issues constitute the core of this study.

Furthermore, few studies have looked at student-faculty informal interaction from a critical perspective, using concepts such as social reproduction, hidden curriculum, habitus, field and cultural capital, and exclusion. For instance, the concept of hidden curriculum can be applied to student-faculty interactions outside of the classroom setting. Professors, for instance, may encourage only some students to interact with them during office hours or may invite only a handful of them to participate in a research project. Professors' favoritism towards certain students may be based on academic factors, but also on non-academic factors. Not only does this informal interaction increase the cultural capital of the ones chosen, but at the same time it sends a message of inadequacy to those who are excluded.

Moreover, seeking out informal interaction with faculty may be necessary in order to succeed in certain academic and professional circles. Since not all students have the same opportunities to benefit, differential informal interaction with faculty may be magnifying the existing inequalities among groups, favoring the already advantaged and hindering the already disadvantaged. Hence, informal interaction could act as a mechanism of closure which 'legitimately' opens doors for some students and not for others.

In sum, there is still a gap in the literature about the implications of student-faculty informal interaction on equality of opportunity. This study attempts to provide a contribution to fill that gap. It is particularly relevant in order to address situations which affect the successful completion and academic achievement of

under-represented groups in higher education, and to further our understanding of the role of education in social exclusion.

1.2 The Problem

I. Rationale for the Study

The purpose of this research is to examine how and to what extent different student groups interact (or do not interact) with faculty outside of the classroom. The study analyzes empirical data to determine the profile of student groups who spend greater or lesser time with faculty outside of class, and of student groups who participate in institutional programs which enhance or promote student-faculty interaction.

As mentioned above, this is an important addition to the literature as not much is known about the rules of exclusion regarding student-faculty informal interaction. It is particularly relevant at this time when affirmative action policies that have increased the educational opportunities of disadvantaged groups for several decades are being eliminated. In California, the setting of this study, two recent measures have struck a blow to affirmative action. The first one occurred in July 1995, when the University of California Board of Regents decided to disallow using race, ethnicity and gender in admissions considerations effective in the spring of 1998. The second one, more important in terms of its political and legal impact, was the passing of Proposition 209 in November 1996 in a popular election. This measure, supported by the Governor of the State of California and voted in by 54% of the electorate, included an addition to the California Constitution which in essence reads as follows:

SEC. 31. (a) The state shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting.

Implementation of this proposition will likely further reduce the chances of underrepresented groups from successfully participating in higher education. As a matter of fact, university officials at the University of California at Los Angeles (UCLA) have already predicted a decrease in minority undergraduate admissions for the 1997/98 school year. Based on the number of undergraduate students filing admissions papers intending to register for Fall 1997, officials are forecasting an increase in the number of White and Asian students, and a significant decrease in the number of American-Indian, African-American and Chicano/Latino students as compared to Fall 1996 (de Cardenas 1997).

In addition to affecting undergraduate admissions, Proposition 209 will also affect assistance programs at UCLA based on gender, race or ethnicity such as outreach, counseling, tutoring and financial aid. This includes two of the programs considered in this thesis. New eligibility criteria are being developed for these programs, including the use of socio-economic status instead of race. However, in a report released by the President's Office of the University of California, it was suggested that the new eligibility criteria (replacing race by socio-economic status) would result in a dramatic decrease in admissions of African American, Chicano/Latino and Native American students, especially at UCLA (Bermeo, 1996).

In spite of the political, ideological and legal dominance of anti-affirmative action policies and discourses, the life of affirmative action is not yet over. Currently, Proposition 209 is being challenged in the courts, and a lengthy constitutional battle is on the horizon.

II. Research Questions

Three main clusters of questions guide this research. The first one examines the impact (academic, social, personal, etc.) of student-faculty interaction. The second set of questions looks at potential inequalities resulting from the inclusion or exclusion of undergraduate students in different types of faculty contact. It also examines changes in interaction experienced by students as they move from high school to university. The last set of questions aims at exploring the features and accomplishments of programs promoting interaction.

1. What benefits (i.e. achievement, retention, etc.) do undergraduate students gain from interacting informally with faculty? (Literature review)
2. What are the main characteristics of interactors and non-interactors in terms of socioeconomic status, ethnicity, gender, education, major and personal characteristics? How does this relationship change from high school to college? (Quantitative data)
3. How do programs which promote student-faculty informal interaction target and attract students? Which students do not participate in these programs? (Quantitative data; Interviews; Document analysis)

1.3 Limitations of the Study

In conducting this research, four limitations must be noted. The first relates to the data used to determine the patterns of undergraduate student-faculty informal interaction. Although the data used was weighted to approximate national norms, it has some limitations. These, as described by Astin (1982), include: self-selection for response and self-reported responses (limited reliability; response bias); generalizability across institutions; non-reporting of data; self-reported ethnicity; and racial definition, especially for the group reported as American Indians.

Secondly, because of limited access to the CIRP data bank, only the cohort who entered university or college in 1987 was studied.

A third limitation relates to the examination of the programs. Although I analyzed four programs at UCLA, this does not mean that they are the only ones which address student-faculty informal interaction. However, these are the major programs I became aware of during my interviews with academic and non-academic staff at UCLA. Several other programs were suggested, but they were too new to provide me with the information I needed in the context of this study.

Fourth, because of restricted human and financial resources, only the programs at one university were studied. As the representativeness of undergraduate students and faculty at UCLA is unknown, the external validity of this portion of the research is limited.

1.4 Organization of thesis

This thesis is organized into six chapters. The first chapter has outlined the general research problem and the limitations of the study.

The second chapter describes the methodology of each component of the research design. The first part of the study, that of exploring national patterns of student-faculty informal interaction, involves a quantitative analysis based on data collected through the national data bank of the Cooperative Institutional Research Program (CIRP). Analysis by gender was based on the data included in reports issued by the Higher Education Research Institute. For the analysis of other variables (ethnicity, parental income, grade point average, major, and self-ratings), specific cross-tabulations were run. For the second part of the study, that of examining programs which involve promoting student-faculty interaction, a multi-part research design was implemented. Quantitative analysis, interviews, and document analysis were all used.

The third chapter presents the literature review and is divided into two sections. The first one reviews the major theoretical contributions to the analysis of educational inequalities and exclusion. It begins with theories which examine educational systems, and then proceeds to theories on student success. Next, a theoretical approach to student-faculty informal interaction is discussed, and finally a critical approach to the analysis of student-faculty interaction is presented. The second part of the literature review looks at the major empirical studies on this topic. It is divided into six sub-topics: (1) purpose or type of interaction; (2) frequency and timing of interaction; (3) impact; (4) factors inhibiting and encouraging interaction; (5) interaction and under-represented groups; (6) institutional programming to increase interaction. Finally, gaps in the literature are noted.

The fourth chapter presents the national patterns of undergraduate student-faculty informal interaction in the USA. Based on secondary data (analysis by gender) and cross-tabulations (all other variables), this data shows how different student groups interact (or do not interact at all) with faculty members in different contact situations. According to the frequency and type of interaction, three major levels of interaction are defined: non-interaction, low-interaction and high-interaction. Student satisfaction levels with this interaction are also explored.

The fifth chapter presents four programs implemented at the University of California at Los Angeles (UCLA) which have a component of student-faculty interaction. In the first one (Student Research Program), undergraduate students participate in a professor's research project. The second program (Graduate Mentor Program Faculty Roundtables), especially targets students from under-represented groups to encourage them to go to graduate or professional school. The third program (Dinner for 12 Strangers), brings together alumni, a faculty member and a group of undergraduate students for a social event. Finally, the last program (Faculty in Residence), holds programs in residence halls to help students succeed at university.

The concluding chapter, Chapter 6, provides a discussion of the findings and presents the main conclusions of the study. Finally, implications for further research into student-faculty informal interaction are advanced.

CHAPTER 2

METHODOLOGY

This study combines several different research methods in order to answer the research questions. Quantitative analysis was used to explore the profile of students who are included and excluded from faculty-student interaction as reported in the USA national CIRP surveys; quantitative and qualitative data, as well as document analysis, were used to analyze the programs researched in this thesis.

2.1 Quantitative Data Collection: CIRP

I. Respondents and Weighting

The quantitative data used in the first section of this study was collected as part a national longitudinal study conducted by the Cooperative Institutional Research Program (CIRP) based at the University of California, Los Angeles (UCLA). Students were surveyed when they entered college in 1987 and then again four years later. Nearly 290,000 first year students completed entering surveys, however a sampling strategy to re-survey this cohort in 1991 was necessary because of fiscal constraints. To achieve as much representation as possible, approximately 175 respondents in each of 23 different stratification cells used in the entering survey were obtained. Follow-up questionnaires were mailed to the students' home addresses in the summer of 1991, and nonrespondents received a second survey in the early fall. Data was also requested from the registrars of each institution in order to correct for questionnaire nonresponse bias (HERI 1992).

Response rates to the follow-up questionnaire were 68% for registrars at institutions and 21% for students (Table 1). A sophisticated weighting procedure developed by Astin and Molm (1972, cited in HERI 1992) was used to correct for potential nonresponse bias using the CIRP survey of first year students,¹ the stratification cell of the student's institution, and the registrar's data (HERI 1992).

Three stages were used in this weighting procedure. First, a series of multiple stepwise regression analyses were done to remove response bias in the CIRP entering year student survey and the registrars' data. These regressions determined the characteristics of first year students which could predict whether or not a student would respond to the follow-up survey. Second, a weighting factor for each student who responded to the survey was determined, and non-respondents were dropped. Responding students who were determined to have a high probability of responding were given a small weight, and those who were determined to have a low probability of responding were given a large weight. Finally, a second weight was used to match population counts by sex and stratification cell. The final weight was determined by the product of these two weighting factors (HERI 1992).

¹ Although in the United States it is common to call entering students 'freshmen', I have chosen to call them first year or entering students.

Table 1: Sample and Respondent Counts and Rates for Selected Characteristics (1991)

	<i>Number sampled</i>	<i>Follow-up # respondents</i>	<i>Registrar # respondents</i>	<i>Follow-up Percent</i>	<i>Registrar Percent</i>
Total	27,111	5,615	18,382	20.7	67.8
Female	16,474	2,922	10,997	25.3	69.4
Male	10,637	2,693	7,385	17.7	66.8
White	21,479	4,969	15,288	23.1	71.2
Black	3,983	349	2,139	8.8	53.7
Amer Ind	235	38	147	16.2	62.6
Asian Amer	732	173	426	23.6	58.2
Mex Amer	248	56	152	22.6	61.3
Other	646	111	381	17.2	59.0
All 4-yr institutions	22,942	4,977	16,297	21.7	71.0
All 2-yr institutions	4,169	638	2,085	15.3	50.0
Public 4-yr institutions	9,769	1,906	6,050	19.5	61.9
Private 4-yr institutions	13,173	3,071	10,247	23.3	77.8
Public 2-yr colleges	3,032	513	1,357	16.9	44.8
Private 2-yr colleges	1,137	125	728	11.0	64.0

Source: HERI 1992.

II. Variables in the study

From the data collected, cross-tabulations were performed for the following variables:

Independent variables:

Ethnicity: White/Black/Asian-American/American Indian/Mexican American

Parental Income: High/Medium/Low

Average Grade in High School

Graduating Undergraduate GPA

Self-rating: Academic ability

Self-rating: Competitiveness

Self-rating: Drive to achieve

Self-rating: Leadership ability

Self-rating: Public speaking ability

Self-rating: Self-confidence (intellectual)

Self-rating: Writing ability

Major: Business

Major: Education

Major: Engineering

Major: Health Professional

Major: Social Sciences

Institutional variables:

All institutions

Dependent variables:

Activity in past year: Worked on a professor's research project

Activity in past year: How often have you been a guest in a professor's home

Had faculty take personal interest in my progress

Satisfaction: Opportunities to discuss coursework outside of class with professors

Satisfaction: Amount of contact with faculty and administrators

Satisfaction: Ability to find a faculty or staff mentor

Hours spent talking with teachers outside of class

Hours spent talking with faculty outside of class

Since entering college, how many faculty have you found that will provide:

Advice and guidance about your educational program

Emotional support and encouragement

Tutorial assistance or help improving your study skills

Honest feedback about your skills and abilities

Intellectual challenge and stimulation

A role model/someone to model yourself after

The percentage of participation in each response category was examined by gender, ethnicity, parental income, undergraduate GPA, major and self-ratings of below average and highest 10%.

2.2 Data Collection: Programs

I examined four programs at the University of California at Los Angeles (for a description of the programs, see chapter 5). A multi-part research approach was taken. Quantitative data, interviews and documents were used to collect data as it pertained to undergraduate student-faculty informal interaction. Existing databases were used to generate reports, and interviews were conducted with key personnel of each of the programs. Pamphlets, newspaper and magazine articles, information published in websites, and internal reports were also analyzed.

CHAPTER 3

REVIEW OF THE LITERATURE

The literature review is divided into two sections: theoretical frameworks and empirical studies. Major contributions to the field are discussed in the context of student-faculty informal interaction, and gaps in the literature are noted.

3.1 Theoretical frameworks

Either implicitly or explicitly, all research is driven by a theory. The differences between research methodologies do not simply relate to alternative means of reaching the same ends or answering the same questions (Shulman 1981). Behind each approach there are usually different social ideologies at play. There are also different levels of analysis which can be performed. For example, educational issues can be analyzed systemically, institutionally, or at the levels of individual actors or events. In this section I will discuss the major theoretical approaches used to analyze educational systems, student success, and student-faculty informal interaction, and suggest the need for a critical approach to this topic.

I. Educational systems

Educational systems can be analyzed from several perspectives. Some theorists look at social and educational change as being driven by consensus (functionalists), and others look at change as being driven by the struggles of different groups to hold power and status (conflict theorists).

The consensus approach to the study of formal educational systems, also known as structural-functionalism, or equilibrium theory, was prominent in the

1950s and 1960s in an era of expansion and increasing standards of living in North America. Its main assumptions are that societies in the West are democratic, technocratic, and meritocratic, and that social status is based on achievement rather than ascription. A key role is assigned to formal education as a mechanism of selection or allocation to ensure that those with the highest abilities and effort rightfully earn the highest social status (Taylor 1994). For functionalists, formal education also plays a primary role in socialization. It not only teaches cognitive and physical skills, but also develops value consensus and transmits society's core values in order to produce functional members of society.

By the 1970s, these major assumptions of functionalism (that Western societies were democratic, expert and meritocratic, and that education greatly contributed to enhance these features) were challenged by conflict theory, which attempted to explain educational inequalities in the context of structural inequalities. Conflict theorists argue that functionalists take the interests and perspectives of the dominant social groups in society and elevate them to the status of universal norms, serving to maintain the privileged position of the members of that group (Feinberg & Soltis 1997b).

Regarding informal interaction with faculty, functionalists would argue that the routine of seeking out this contact is a necessary behavior required by those who will be successful in modern institutions; thus this organizational feature and routine of school life is necessary "to develop the psychological dispositions appropriate for work and citizenship in industrial society" (Feinberg & Soltis 1997a: 69). Conflict theorists argue that schools do not provide equal opportunities

to all students, and would claim that the benefits of student-faculty informal interaction are not available to all.

II. Student Success

Several models have been developed to explain the process that a student undergoes throughout college, from preparing for college, to entering college, to persisting (or not persisting) until a degree is earned.

Perhaps the most well-known model is Tinto's (1993) model of institutional departure. The model starts with recognizing the varying patterns of personal, family, and academic characteristics and skills a student has when starting college or university (preenrolment factors). These also include initial dispositions and intentions with regard to college attendance and personal goals. As the student progresses through college, these dispositions and intentions are continuously modified and re-modified through interactions with others in the academic and social systems of the institution, with academic integration somewhat more important than social integration (Tinto 1985). The more satisfying and rewarding experiences the student encounters, the more integrated the student becomes into those systems, and the more likely the student will persist.

Astin's theory of student development (1984) predicts a student's personal and academic development in terms of involvement. He argues that "the greater the student's involvement in college, the greater will be the amount of student learning" (Astin 1984: 307). Hence, student involvement, defined by Astin as the quantity and quality of physical and psychological energy invested in the college experience, is directly related to the amount of learning and personal development. Consequently, in accordance with this model, the more a student gets involved in

quality interactions with faculty, the more she or he will benefit. However, it must be noted that the student plays the central role in this model and must "actively exploit the opportunities presented by the environment" (Pascarella & Terenzini 1991: 51). The impact of structural inequalities which may limit the level of involvement by some groups are not addressed.

Pascarella's (1985) general model for assessing change considers the direct and indirect effects of five major sets of variables on learning and cognitive development:

- (1) student background/precollege traits;
- (2) structural/organizational characteristics of the institution;
- (3) the institutional environment;
- (4) interactions with agents of socialization;
- (5) quality of student effort.

In accordance with this model, student-faculty interaction is directly influenced by the first three variables, and in turn influences quality of student effort and learning and cognitive development. The structural features of an institution have an indirect rather than direct effect on student development (Pascarella & Terenzini 1991).

Similarly, Weidman's (1989) model of undergraduate socialization takes into consideration both psychological and social structural influences on student change. In addition to background characteristics such as socioeconomic status, aptitude, career preference, aspiration, and values, students are influenced by normative pressures from their parents, peers and other groups. This, in addition to their academic and social collegiate experience, determines their career choice, life-

style preference, aspirations and values (Pascarella & Terenzini 1991). Weidman is one of the few to recognize the impact of the hidden curriculum on the socialization of undergraduate students. This concept is discussed in more detail in a following section below.

III. Student-Faculty Informal Interaction

As can be expected, there are not many theoretical models of student-faculty informal interaction. In my extensive literature review, I was only able to find one model to predict and explain students' frequency and type of interaction with faculty. This model was developed by Shaw and Creamer, who found that "the more involved students are in all aspects of college, and the more positively they perceive themselves and the college environment, the more likely they are to seek informal, out-of-class interactions with professors" (Shaw & Creamer 1984: 15).

This model was based on an exploratory study which used grounded theory to discover categories and properties associated with students' patterns of interaction with faculty. Eight conceptual categories were identified from interviews with students: (1) motivation and college goals; (2) patterns of association and communication; (3) perceptions of the environment (academic and social); (4) self-image (abilities and personality); (5) college activities; (6) perceived role of faculty; (7) peer pressure; and (8) frequency and nature of interaction with faculty (Table 2). These were then collapsed into three core categories (self-esteem, perception of the environment, and involvement in student life) which form the major components of their generalized theory of student-faculty interaction (Table 3).

Table 2: Typology of students with regards to interaction with faculty

Conceptual Category	Type 1	Type 2	Type 3
Motivation and college goals	Nature of goals	few/unclear	academic/career
Patterns of association and communication	Acquaintances Friends Meeting people	few few highly uncomfortable	some some somewhat uncomfortable
Perceptions of the environment	Academic Social	negative negative	positive negative
Self-image	Abilities Personality	negative negative	positive negative
College activities	Amount Nature	few special interest	few professional/ academic
Perceived role of faculty	Perceptions inhibiting interactions	yes	yes
Peer pressure	Extent of influence	high	high
Interactions with faculty	Frequency Nature	low, when necessary course-related	low, when necessary career/ course-related

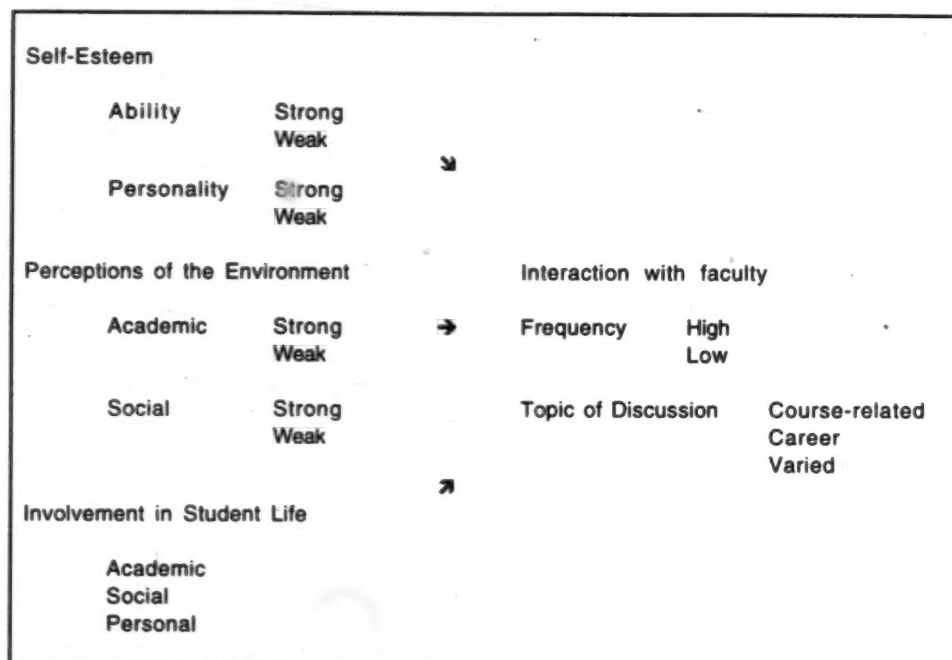
Source: Shaw & Creamer 1984: 12.

Table 2 (continued): Typology of students with regards to interaction with faculty

Conceptual Category	Type 4	Type 5
Motivation and college goals	Nature of goals	academic/career
Patterns of association and communication	Acquaintances Friends Meeting people	many many highly uncomfortable
Perceptions of the environment	Academic Social	positive positive
Self-image	Abilities Personality	positive positive
College activities	Amount Nature	many professional/ honor/service
Perceived role of faculty	Perceptions inhibiting interactions	no
Peer pressure	Extent of influence	low
Interactions with faculty	Frequency Nature	high career/course-related varied

Source: Shaw & Creamer 1984: 12.

Table 3: Shaw and Creamer's Theoretical Model of Student-Faculty Interaction



Source: Shaw & Creamer 1984: 8.

Although this model may explain interaction patterns for some groups, it does not adequately explain why some students do not interact at all, and also fails to take into consideration differences in educational opportunity and cultural capital.

In order to complement this model, it is important to examine the dynamic of student-faculty informal interaction in all its complexity. Based on the literature in conjunction with Spradley's (1980) descriptive question matrix, I identified several dimensions of this type of interaction:

- (1) type and content (academically focused, social, emotional support, remedial, etc.)
- (2) frequency (number and length of interactions)

- (3) impact (on students, faculty, institution, etc.)
- (4) actors (personal and professional characteristics; power relations; perceived roles; involvement in other areas, etc.)
- (5) timing (e.g. how does interaction vary over time; at different times)
- (6) academic program (e.g. social sciences, natural sciences)
- (7) atmosphere of interaction (collegial, personal, relaxed, comfortable, professional, stressful etc.)
- (8) goals of participants (who initiated the interaction, why, etc.)
- (9) place (office, professor's home, research lab, public space, virtual space etc.).
- (10) components of interaction (how the interaction is organized, role of each actor, sequencing of events)
- (11) institutional culture (research-oriented, student-oriented etc.)

These components provide focus for further research necessary to more fully understand the dynamic of student-faculty informal interaction, including the impact of inequalities of opportunity. Issues of inequality in this dynamic are considered in the next section.

IV. A critical approach

As can be seen in this literature review, most approaches to analyzing student success in general, and informal student-faculty interaction in specific, fail to take into consideration inherent inequalities in our educational system. From a critical perspective, these inequalities, that begin even before kindergarten, are reproduced and magnified all along the way, up to post-secondary education. Critical theorists have advanced important concepts that provide a better understanding of different school dynamics that perpetuate social and economic

inequalities. What follows is a brief summary of some the most relevant contributions to this discussion.

Education and social reproduction

In their classic study *Schooling in capitalist America: Educational reform and the contradictions of economic life*, Bowles and Gintis (1976) argued that the school system serves to reproduce class inequalities from one generation to the next. They maintain that the established authority based on expertise and competence is in reality a myth; instead it is based on power and manipulation. Schools in capitalist societies do not serve to pursue equality; rather they serve to provide a disciplined and skilled labor force and a mechanism for social control. In a more recent reply to their critics, they explained that this 'correspondence' between school and work is based on two assertions:

first, it holds that to the extent that the educational system reproduces the capitalist economy, it does so by virtue of a correspondence between the social relations of education and the social relations of production. That is, the division of labor in education, as well as its structure of authority and reward, mirror those of the economy. Second, it holds that in any stable society in which a formal educational system has a major role in the personal development of working people, there will tend to emerge a correspondence between the social relations of education and those of the economic system. (Bowles & Gintis 1988: 237)

Furthermore, Bowles and Gintis maintained that "schools cannot at the same time promote full personal development and social equality, while integrating students into society" (Ibid.). This contradiction arises not because of any failure of the school system, but as a result of the very nature of "the type of society in which these schools are embedded" (Bowles & Gintis 1988: 236). In other words, the

"roots of repression and inequality lie in the structure and functioning of the capitalist economy," not in the educational system (49).

This implies that we have to look beyond the educational system to understand how inequality is reinforced and reproduced. Bowles and Gintis in self-criticism, and those who have revisited them in a critical manner, recognize that reproduction does not occur in mechanistic terms. They acknowledge that agency plays a role and there will be anomalies and resistances. However, the relevance of the concept of social reproduction is that subordinate social groups have less opportunity than dominant social groups to participate and succeed in higher education.

Labeling and self-fulfilling prophecies

Although this study focuses on out-of-classroom interaction, research on classroom interaction suggests a strong correlation between teachers' expectations of students' performance and their actual performance. In a pioneer anthropological research on the topic, Rist (1970) studied kindergarten, first grade and second grade children in a poor, black, urban school, to find out how teachers decided about their students' academic potential. He found that judgments made about the academic ability of the children were based on criteria that had little to do with their real abilities. Instead, non-academic characteristics such as the child's physical appearance, interactive behavior, use of language, and known social status were used by the teacher to decide which 'track' of the class the child should be placed in. Indeed, the teacher placed students in three seating arrangements that corresponded to their expected performance. Once students were labeled, a self-fulfilling prophecy began to operate, and performances met expectations: students

who were placed in the fast group and expected to do well, performed at a high level, and students who were placed in the slow groups performed at the expected slow level. Moreover, this was not a temporary situation. Not only was mobility between tracks low during the school year, but the placement arranged by the kindergarten teacher continued throughout elementary school. Regardless of their ability, children who were placed in the lower group and labeled as 'slow learners' were likely to stay there for the rest of their educational careers. And, as Oakes (1985) pointed out, the educational system is directly responsible for student failure by the very nature of its organization throughout high school. In her research on tracking, she found that the intelligent quotient scores of senior high school students decreased after they were put in lower streams. Thus, 'labelling' has a strong impact on student achievement.

What this and similar studies show is that in spite of the belief that society is meritocratic, students' ascriptive characteristics such as social class, sex and ethnicity have a strong influence in their academic success, and that, contrary to the assumption that schools provide equal opportunity to everyone, teachers have much to do with that situation. For that reason, we need to look at failure as something that is done to us instead of something we do to ourselves. In this respect, academic achievement and failure are not natural phenomena that can be explained only by genetic variables; they are socially constructed, and they play a crucial role in maintaining the situation of privilege of dominant groups (Trueba 1991; Kuh and Whitt, 1988; McDermott 1987).

Higher education is not alien to this situation. Although the recent expansion of the higher education system has opened opportunities to many people who were

previously excluded from it, the structural organization of the system and the culture of individual higher education institutions serve to perpetuate the status quo and to hinder social and economic mobility. Indeed, class, gender, and ethnic inequalities are not only found in elementary and secondary schools. In higher education, they are present in institutional stratification (e.g. elite private universities, public universities and community colleges), enrollment patterns (e.g. underrepresentation of working class, ethnic minorities and women in high-status, high-paid careers), and classroom interaction (e.g. paying more attention to male and white voices), etc.

Habitus, field and cultural capital

Bourdieu's concepts of habitus, field and cultural capital are also useful to examine inequalities in the educational system.² The university system, from this perspective, can be considered a 'field' where "agents and institutions constantly struggle" and where those who dominate "are in a position to make it function to their advantage but ... must always contend with the resistance, the claims, the contention, political or otherwise, of the dominated" (Bourdieu & Wacquant 1992: 102).

An analysis which incorporates the concept of 'field' must take into account the structure of the relations and dynamics between the positions held by actors or institutions competing for authority in specific sites. It must also consider the

² 'Habitus' has been defined as "predispositions to perceive, appreciate, and act, which in turn govern the selection of problems, their solution, and the evaluation of solutions" (Murphy 1988: 19). Put another way, habitus refers to "a class-based system of beliefs about the social world" (McDonough in press: 1). A field is both an arena of conflict and of competition, "a battlefield, in which participants vie to establish monopoly over the species of capital effective in it" (Bourdieu & Wacquant 1992: 17). Cultural capital is a symbolic good, such as certain types of knowledge, which can be converted to economic capital in order to maintain status and privilege across generations (McDonough in press).

habitus of agents, that is, "the different systems of dispositions they have acquired by internalizing a determinate type of social and economic condition, and which find in a definite trajectory within the field under consideration a more or less favorable opportunity to become actualized" (Bourdieu & Wacquant 1992: 104-105).

At the same time, the differential cultural capital that undergraduate students bring with them to the university must be considered. This can make a substantial difference in the way they take advantage of the opportunities offered by the college, including initiating contacts with faculty, and the way they are labeled and treated by faculty members.

Closure and exclusion

Closure theory, as developed by Weber and then elaborated by Parkin, Collins and Murphy, is another useful tool in order to analyze relationships within and among scholarly disciplines, and between the scholarly community and the community-at-large (Morrow & Torres 1995). Closure theory examines the access to resources which are necessary to enhance one's knowledge, and how that particular type of knowledge creates a particular type of status group. It also looks at how social collectivities try to maximize advantages by restricting access to resources and opportunities to a selected few (Parkins 1979, in Vieira 1996).

An examination of exclusionary practices throughout history shows that these rules are not permanent; rather they are "dialectic without predestination" (Murphy 1988: 4). Along this line, as larger numbers of students gain accessibility to higher education, the upper and middle classes, threatened by usurpation, establish new strategies of social closure (Vieira 1996).

The concept of closure is a useful tool to explain gender, ethnic and class inequalities in the educational system. But more to the point, it could also be applied, in the context of this thesis, to understand the dynamics of inclusion and exclusion of student-faculty interaction outside of the classroom. It is particularly helpful in the case of faculty-initiated interactions. Through informal interaction with students, faculty enhance their abilities as gatekeepers, influencing who gets into graduate school and controlling the social and academic integration of graduate students by allocating assistantships and providing opportunities to work on research projects, attend professional meetings and co-author manuscripts (Clark & Garza 1994). Students who do not interact at all or engage in low levels of informal interaction become excluded from many such academic and social events.

The hidden curriculum

Also relevant for this study is the concept of 'hidden curriculum.' The hidden curriculum, a dynamic identified by both functionalists and conflict theorists, refers to the indirect socialization of students by schools into societal norms and values. The hidden curriculum is expressed through rules, regulations, routines and rituals, and also includes grade levels, tracking and hierarchical authority structures (Taylor 1994).

It has been argued that the main components of hidden curriculum in elementary and secondary schools are its "rigid hierarchical structure, a dominant teaching method that spoon-feeds children, and the sorting and slotting of students into categories of 'winners' and 'losers' " (Contenta 1993: 27). This type of system is legitimized by the principle of meritocracy, in which social mobility and status are

determined by talent, ability and effort, instead of birthright or privilege. Still, the extent to which schools are actually meritocracies is arguable.

According to Hurn (1985), there are three propositions a society much fulfill if it is truly meritocratic. First, the correlation between educational and occupational status will increase over time. Second, the correlation between parents' social status and the social status of their children will decrease over time. Third, the correlation between parents' social status and the educational achievements of their children will decrease over time. However, while the available evidence in most societies tends to confirm the first statement, there is little support for the other two. For Hurn and many others (see, for instance, Bowles and Gintis 1976, Anyon 1980, Oakes 1985, Contenta 1993), meritocracy is still much more a myth than a social reality.

Even though a considerable body of research has shown that our educational systems are not meritocracies, most students, parents and teachers, believe that society provides everyone equality of opportunity through schools. They also have internalized the belief that those who do not succeed fail because of their own shortcomings (intellectual deficiencies, lack of effort or discipline, etc.) and not because of a structural discrimination embodied in everyday practices. This leads to a tendency to blame the victim and not question the system. Furthermore, very few school reform proposals recognize and attempt to change the hidden curriculum (Contenta 1993). Minority groups also tend to accept the view that education provides equal opportunity without questioning the system. As Contenta (1993: 91) observed, "when everyone around you tells the story of a world view and your place in it, you start living that story as if it were natural". According to

Astin (1982), this meritocratic view of society is responsible for many of the obstacles facing disadvantaged minorities in American higher education. The very presupposition that the 'winners' and 'losers' compete in a fair race and that some groups are less likely to 'succeed,' limits opportunities for many students.

Typically, the hidden curriculum has been addressed in studies on classroom interaction and institutional practices. However, this concept could be also useful for analyzing informal student-faculty interaction. The tendency of some professors to interact with certain groups of students over others potentially gives these students an advantage and may increase inequalities. This tendency does not have to be necessarily deliberate. Granted, some professors encourage students to see them during office hours by making it part of the requirements of the course, but in general terms faculty who initiate interactions (inviting some students to collaborate in a research project, to a conference, to a social function, etc.) usually select some students based on expectations of performance. Although in some cases these expectations may be well founded, in many others they may be the product of wrong assumptions and lead to situations of favoritism. As a result of this dynamic, students who interact more are gradually able to enter the inner circles of academia, and those who do not interact are gradually being left outside.

However, at the undergraduate level most interaction is initiated by the student, usually talking to professors during office hours. Those students who have been socialized to seek out such interactions, or know how much they can gain by 'playing the game,' continue to gain advantage. Those students who do not initiate such interactions, for whatever reasons, are not getting the same benefits as those who do. Since schools, including universities, do not provide equality of

opportunity, the existing patterns of informal interaction with faculty for undergraduate students may be widening the gap between the already advantaged and the already disadvantaged, a dynamic that, for instance, could reinforce or inhibit a decision to continue to graduate school .

V. Concluding remarks

Educational systems, educational institutions, student success, and student-faculty informal interaction can be analyzed from different theoretical and methodological perspectives. This section summarized the mainstream versions of two of these approaches, namely functionalism and conflict theory. Most of the studies on student-faculty interaction tend to follow a functionalist perspective. Hence, they tend not to pay central attention to issues of power, structural inequalities, discrimination and exclusion, and to those who do not participate in such interaction.

In this thesis, student-faculty informal interaction is analyzed from a conflict perspective. In a departure from most studies on the topic, it addresses not only those groups included in such interactions, but also those which are excluded. This perspective guides the literature review, the methodological design, the data analysis, and the conclusions.

3.2 Empirical studies of student-faculty informal interaction: Literature review

Although interaction between students and professors was common in early residential colleges, just a few decades ago interaction between university students and their professors outside of the classroom was described as "fairly infrequent

and superficial" (Gaff et al. 1975). At that time, little was known about the potential benefits of increased informal interaction between students and faculty. During the following three decades, an extensive body of literature emerged. For the purpose of this literature review, I have grouped the studies into six themes: (1) purpose or type of interaction; (2) frequency and timing of interaction; (3) impact; (4) factors inhibiting and encouraging interaction; (5) interaction and underrepresented groups; and (6) institutional programming to increase interaction.

It is pertinent to note that very few studies on undergraduate students in the USA pay attention to minority or non-traditional students. As Terenzini et al. (1996: 150) have pointed out, the focus of the current body of literature on the impact of college "is dominated by studies of White, traditional-age, full-time students attending four-year, residential institutions. Studies of differential effects relating to race/ethnicity or gender ... are rare."

1. Purpose and type of interaction

There are many types of informal student-faculty informal interaction. For instance, Spady (1971) identified six categories of possible interaction activities between undergraduates and faculty:

- (1) discussing their academic programs,
- (2) discussing matters relating to their future careers,
- (3) helping them resolve disturbing personal problems,
- (4) discussing intellectual or academic matters,
- (5) discussing campus issues and problems, and
- (6) socializing informally

In a like manner, Wilson et al. (1975) defined different roles that faculty undertook in terms of interaction with students: instructor, educational advisor, career advisor, friend, counselor and campus citizen. Likewise, the Cooperative Institutional Research Program (CIRP) identifies several different roles of faculty members in their American College Student surveys: providing (1) advice and guidance about educational programs, (2) intellectual challenge and stimulation, (3) feedback about skills, (4) emotional support and encouragement, (5) acting as role model, (6) providing letters of recommendation for a job, (7) tutorial assistance, (8) help cutting through 'red tape', and (9) sponsorship for special programs (HERI 1992).

However, not all types of student-faculty informal interaction were found to be of equal importance, or to occur at the same frequency. Of the faculty roles identified by Wilson et al. (1975), those with a more academic purpose (instructor and educational advisor) were found to be the most frequently reported role capacities in student-faculty informal interaction. The other four capacities (career advisor, friend, counselor and campus citizen) were seen to be more of an optional type of interaction with students, and were found to be "more strongly related to the faculty characteristics that seem to facilitate or impede out-of-class interaction" (Wilson et al. 1975: 35). Along the same line, Iverson, Pascarella and Terenzini (1984) in their study of faculty-student interaction at a major, urban, nonresidential, state-supported U.S. university, found that the average student had less than one purely social contact with faculty, and three times as more contacts to discuss intellectual or course-related matters.

Content as well as frequency was found to be important by Pascarella and Terenzini (1991), who found that most influential interactions appeared to be those that focused on ideas or intellectual matters. These types of interaction and their perceived quality most positively influenced persistence for students who had low initial and subsequent commitment to the goal of education, or whose parents had relatively low levels of formal education. Interaction with faculty became less important for persistence with higher levels of family education and graduation commitment (Pascarella & Terenzini 1991).

In a study of students' preferences for advising styles from university professors, Alexitch (1997) found that students' gender, grades, educational orientation and previous advising experiences were all predictors of students' advising preferences. Gender was the strongest predictor, with females having a stronger preference for collaborative advising than males. Those who were least satisfied with their advising experiences were those who preferred a more developmental type of advising rather than prescriptive advising. Grade-oriented students (as opposed to learning-oriented) were more interested and concerned with content rather than style.

II. Frequency and timing of interaction

Other studies have examined the frequency of student-faculty informal interaction and its relationship to student success. Pascarella and Terenzini (1978) among others found that "the frequency of student nonclass contact with faculty to discuss intellectual matters [such as critical evaluation of ideas and applying abstractions or principles in problem solving] had a statistically significant positive association with reported gains in intellectual development during the freshman

year" (cited in Pascarella & Terenzini 1991: 149). On the other hand, Endo and Harpel (1981) examined different types of student-faculty interaction and found that "friendly" interaction had a greater impact on intellectual outcomes than "formal" interaction, and that the frequency of "friendly" interaction had a positive effect on overall satisfaction with the college experience. Neither frequency of "friendly" nor frequency of "formal" interaction was found to affect academic achievement (Endo and Harpel 1981).

Several more recent studies have associated frequency and student outcomes. Romanski's (1987) study of faculty-student interaction, as measured by the number of hours a week spent talking with faculty outside of class and the frequency of being a guest in a professor's home, showed that students' academic performance, satisfaction with the overall college experience, degree aspirations and retention all increased as a result of increased interaction. Similarly, Arredondo (1995) found that as the amount of contact with faculty increased, so did the student's degree aspirations: students who spent more hours with faculty, who were invited to professors' homes, or who worked on a professor's research project were more likely to aspire to graduate study than students who did not. Notwithstanding, Astin (1993: 343) did not find any effects uniquely attributable to hours per week spent teaching and advising students, suggesting "that the quality of faculty-student contacts may be of critical importance."

The timing of initial contact was also found to be important. Research conducted in the 1960s suggested that a student's socialization to the normative academic and social climate of an institution is often essentially complete by the end of the first semester (Wallace 1966 in Pascarella & Terenzini 1980). With regard to

student-faculty contact, close personal relationships formed with faculty in the first two years of college were found to be particularly significant on a student's educational aspirations, and determined the frequency of subsequent informal contact a student will seek with faculty (Pascarella & Terenzini 1980, 1991).

III. Impact on student success and development

There is a large body of literature on the correlation between student-faculty informal interaction and its impact on student success and development. In fact faculty has been found to be the most significant aspect of a student's undergraduate development next to their peer group, having a significant positive correlation with every academic attainment outcome: college GPA, degree attainment, graduating with honors, and enrollment in graduate or professional school (Astin 1993). In Astin's (1993) study, overall student-faculty interaction had its strongest positive correlation with satisfaction with faculty, and perception of a student-oriented faculty. He also found that interacting frequently with faculty had a positive effect on choosing college teaching as a career. In addition, hours per week spent talking with faculty outside class, working on professor's research projects and having class papers critiqued by instructors all contributed to raising the degree aspirations of undergraduate students.

In their extensive literature review, Pascarella and Terenzini (1991) found that student-faculty informal contact is positively linked with a wide range of outcomes, including perceptions of intellectual growth during college, increases in intellectual orientation, liberalization of social and political values, growth in autonomy and independence, increases in interpersonal skills, gains in general maturity and personal development, orientation toward scholarly careers, women's

interest in and choice of sex-atypical (male-dominated) careers, changes in students' occupational values, changes in educational value, academic or cognitive development, student career interest and career choice during college. Other studies have found that a personal connection between teacher and student could be the single most important contributor to student growth and to students' satisfaction with their education (cited in Carson 1996).

Although studies have shown that student-faculty interaction is significantly related to educational aspirations, bachelor's degree completion, and educational attainment through the doctoral degree, the causal direction of the link is not clear. However, strong causal links have been found between student-faculty informal interaction and the decision to attend graduate school. Female faculty role models have been found especially to influence the educational aspirations of undergraduate women. They have also been reported to be more influential career role models and mentors for female students than for male students, although further study is needed (Pascarella & Terenzini 1991).

IV. Factors inhibiting or encouraging interaction

Studies focusing on factors which inhibit or encourage students and faculty to interact outside of the classroom focus on the characteristics of the students, faculty members, and institutions.

In one of the first major studies on the student-faculty informal interaction conducted in the 1970s (Gaff et al. 1975), students were asked how many different conversations of ten minutes or more they had with faculty members during the preceding month. It was found that most students, even in their senior year, had only a modest contact with their professors outside the classroom. Students who

were most heavily involved in intellectual, activist, artistic and (to a lesser extent) campus political activities were found to more likely have actively cultivated relationships with faculty members than students with other interests. This study also found out that:

- there was significantly less interaction at large, research universities than smaller colleges;
- high interacting students had a tendency as freshmen to be somewhat more like faculty than low interactors;
- living arrangement and number of hours worked did not affect the amount of interaction;
- high interactors more aggressively pursued their own educational interests than did their peers;
- a student's inability or unwillingness to initiate contact with faculty was a major barrier;
- low interactors did not seek out or get any help with academic skills from faculty; and
- high interactors had a greater sense of who they are and where they were going.

Astin (1977) found that the strongest predictor of student-faculty interaction was the student's interpersonal self-esteem at college entry, although what happens after a student arrives on campus may be more important (Pascarella 1980). Other positive pre-enrollment factors identified in the study were: frequent use of the library in high school, religiousness, musical interests, altruism, and artistic interests. Pascarella (1980: 560) suggests that "students who interact frequently with faculty outside of class are significantly more similar to faculty in their

preenrollment values, interests, and aspirations than are students who tend to limit their contact with faculty to the classroom." Others have found that the more students are involved in social and academic communities in college, the more frequently they make contact with faculty outside of class (Shaw & Creamer 1984; Tinto 1993).

Background characteristics, college experiences and the type of institution a student attends were found by Romanski (1987) to affect a student's level of interaction with faculty. Students with high self-ratings of academic ability, social confidence and the drive to achieve tended to interact more with faculty. Other background characteristics which were correlated with faculty interaction were: having high past academic performance (as measured by high school grades and academic rank) and educated parents, attending college for the primary reason of preparing for graduate or professional school, having high initial degree aspirations and attending an institution further away from home. College experiences which positively affected the amount of faculty-student interaction included: participating in an honors program, working on the research projects of professors, devoting a large number of hours to studying and homework, and attending classes. Participation in student clubs, election to student office, part-time employment on campus, involvement in volunteer work, residing on campus, attending religious meetings and exercising were also correlated with increased interaction with faculty. As far as the type of institution that the student attended, students at private institutions interacted more with faculty than did students in public institutions.

Faculty characteristics were also correlated to high, medium and low interaction with students. One early study identified a group of high-contact faculty

and found they were more concerned with the affairs of society as a whole, and less likely to favor the status quo in higher education; on the other hand, a group of low-contact faculty members were found not to desire an increase in the amount of student-faculty interaction, number of interdisciplinary courses, use of independent study, proportion of courses directed at social problems and extent to which students help determine the content of courses (Wilson et al. 1975).

In a similar study, Gaff and his collaborators found that high-contact faculty held a more favorable view of students. Their educational philosophy endorsed student-faculty interaction and concern for the whole student, and they appeared most open and accessible. They were more dynamic, interesting and 'showy' in their course presentations, and more discursive in their approach to subject matter. Age, rank, years of teaching experience, research productivity, political affiliations and self-designations did not affect interaction, although natural scientists reported less interaction with students (Gaff et al. 1975).

Likewise, accessibility and openness of faculty were important factors in other studies. Significant student-faculty interaction begins in the classroom, where initial contact takes place, and where cues regarding openness and availability can be observed (Berry 1985; Roueche & Roueche 1985). Accessibility outside the classroom was an important factor in whether or not faculty had a significant impact on students, as was interaction with major field professors who had a high standard of scholarship (Phelan 1979; Pascarella & Terenzini 1991). Wilson (1991; 1994) found that accessibility, approachability and availability of faculty, combined with genuine caring, was of significant importance to the success of aboriginal university students in Alaska.

Other factors have been found to inhibit student-faculty informal interaction. These include constraints of work, commuting to campus, first year programs on campus with large classes taught by graduate students, and non-accessible faculty (Boyer 1987; Chickering 1974; Maklmes 1972; Wallace 1967; all cited in Pascarella & Terenzini 1991). As well, the expectations of undergraduates towards interaction with faculty may be such that they simply do not desire to establish close relationships with faculty (Feldman & Newcomb 1969 in Pascarella & Terenzini 1991; Hartnett 1976 cited in Kwong 1991: 85).

The structure of an institution's reward structure in determining tenure, promotion and salary increase was another factor leading faculty to prioritize their time to publishing, preparing grant proposals, or presenting at conferences, as opposed to interacting with students (Toy 1985). Finally, the belief of some faculty that "the admissions department should be recruiting better students" was also cited as an inhibiting factor to student-faculty informal interaction (Toy 1985).

V. Interaction and underrepresented groups

Throughout the years many studies of inequality of opportunity have been conducted which show the significant effects of input variables such as gender, ethnicity, and socio-economic background on student outcomes have been conducted. However, very few have addressed specifically the issue of student-faculty informal interaction.

One such study which did address student-faculty informal interaction found that the amount of informal student-faculty interaction focusing on academic topics had a significant positive influence on post-entry year educational aspirations of white students, but not for nonwhite students (Iverson, Pascarella & Terenzini

1984). The researchers' contention is based on the fact that nonwhite students have somewhat less academic contact with faculty than white students, and that a certain minimum amount of informal interaction is necessary in order to have any influence. They also questioned the assumption that informal interaction with faculty influences the educational aspirations of students, suggesting that the opposite dynamic takes place: increases in educational aspirations lead students to seek out increased contact with faculty. Since white students have higher aspirations, they may seek out this contact to a greater degree than nonwhite students (Iverson, Pascarella & Terenzini 1984).

In a similar study (Mayo et al. 1995), three minority groups (Mexican American, Black and Native American students) were compared to non-Hispanic White students. They found that having a faculty or staff role model, both ethnically matched and cross-ethnic, was significant for all four groups in contributing to academic achievement. Second, the most academically successful Black and White students met with instructors outside of class. Third, satisfaction with personal contact with instructors was significantly related to academic performance for White, Mexican American and Native American students, but not for Black students. They concluded that informal relations with faculty are important for the academic success of minority students. However, the differences found among the four racial/ethnic groups suggested that each be considered separately rather than as homogeneously.

Furthermore, Sheehan and Pearson (1995) studied Asian international students and American students' psychosocial development and suggested that Asians probably had less interaction with faculty and students outside of the

classroom because of language proficiency and cultural differences. They speculated that this "would leave them marginalized in the academic community and limit their ability to engage totally in the learning process," but recognized that as the international students became more familiar with American culture and became more proficient in English, their findings would probably change (Sheehan & Pearson 1995: 528). This hypothesis clearly applies to students who had a tendency to be high interactors in their countries of origin, because as language skills increase, the ability to interact obviously increases. However, it is not so clear to what extent becoming familiar with American culture and language, by itself, would encourage the interaction of those who were low interactors in the first place.

Studies on graduate student-faculty relationships which look at underrepresented groups are more abundant. In a study of graduate student-advisor relationships at a major research university in the United States, Kwong (1991) found that out of the four ethnic groups she analyzed (Asian, Black, Caucasian and Latino), Latino students and those with Latino advisors socialized informally more frequently than the other ethnic groupings. Latino students also desired more interaction with their advisors than did the other groups. In another study, faculty mentoring played an important role in the satisfaction level and sense of belonging of Chicano and American Indian doctoral students with their doctoral program (Williamson & Fenske 1992). However although the two ethnic groups responded similarly to most of the variables, there were significant differences between women and men. Same-gender and same-ethnicity pairing of mentors and students also significantly affected academic satisfaction (Williamson 1996).

Effects of college on first-generation students (first to access higher education in their families) have also been shown to be different from their peers. In the first year of a three-year longitudinal study, Pascarella et al. (1996) found that first-generation students were more likely to come from low income families, be Hispanic, have weaker reading, math and critical thinking skills, have lower degree aspirations, and, more relevant to the focus of this thesis, were less involved with peers and teachers in high school.

VI. Institutional programming to encourage interaction

In order to increase student success, many universities have found that institutional programming can encourage links between students and faculty. For example, effective orientation programs which incorporate students into the social and intellectual life of the institution have been shown to increase involvement of students with faculty. At the same time, however, this increased interaction has made students more critical of its quality (Rice & Thomas 1989; Saluri 1985; Tinto 1993).

Other programs found to encourage student-faculty contact are a) faculty in living-learning centers in residence halls; b) faculty supervision of student organizations; c) student-faculty intramural teams, d) faculty-student committees, and e) faculty mentors (Blimlin and Alschuler (1996). However, few studies have been done on the effects of these programs. One study that analyzed a faculty-student interaction project in a residence center, found that the project did not have a significant positive influence on students, but it did create positive public relations for the university (Schuh & Kuh 1984). Another university program that incorporated faculty and staff into residence halls found that social encounters were

more effective than 'mini-lectures,' and that formal presentations should be avoided (Jackson & Stevens 1990).

By the same token, many retention intervention strategies emphasize student-faculty interaction. Schreiner et al. (1988) studied students who were identified as 'at-risk' in terms of retention and found that a comprehensive retention program which involved faculty and concentrated on social and academic integration had a positive effect on retention rates. Several authors have identified retention programs in the USA containing practices which lead to maintaining or improving retention rates (Noel & Levitz 1985; Saluri 1985). These successful practices include: academic alert systems, academic advising and career guidance, campuswide collaborative efforts and research, communication with students, involvement experiences, learning assistance/support, orientation, out-of-class contact with faculty, peer support, residence halls and structure. Nevertheless, as Tinto (1993) points out, no program can "replace the absence of a high quality, caring, and concerned faculty and staff."

3.3 Concluding Remarks

Today, after almost three decades of study, a lot more is known about student-faculty informal interaction. The early studies focused on quantity, while current research is looking at the how and why of student-faculty interaction, with more emphasis on quality rather than frequency (see Lamport 1993).

It must be noted that even though many studies have found a correlation between the amount of student-faculty informal contact and factors such as student success, achievement and the decision to attend graduate or professional school, the

causal direction of this relationship is not clear. These causal linkages could be circular or reciprocal. For example, there is a positive correlation between the nature and frequency of students' out-of-class contacts with faculty members and gains in one or another measure of academic or cognitive development. It is not clear if these students are more likely to seek contact with faculty members, or if the contact promotes these outcomes (Terenzini et al. 1996).

In spite of its great contribution, the literature on the topic tends to assume that student-faculty interaction always has a positive impact. Few studies mention the possible negative effects of student-faculty interaction. Since any relationship between students and professors is shaped by power (Zalk 1990: 145), there is always a possibility of abuse of power. As Zalk points out, a professor can nurture or inhibit a student's ability to think critically, enhance or diminish student's self-esteem, and influence students to continue or give up (146). The possibility of abuse of power has implications for institutional programming, and raises the necessity of providing safeguards and clear definitions of unethical behavior for both faculty and students.

One typical case of abuse of power is sexual harassment. Sexual harassment can include gender harassment, seductive behavior, sexual bribery, sexual coercion, and sexual imposition or assault (Fitzgerald & Ormerod 1991). Although in the majority of cases, sexual harassment is not reported (Adams et al. 1983; Biaggio et al. 1990; McKinney 1990), most studies indicate that between 20 to 30 percent of undergraduate women in the US experience harassment by at least one of their professors during their college years (Rabinowitz 1990; Sandler & Shoop

1997). Using the lower figure, 20 percent, this means 1.4 million US female students are sexually harassed on campus by a faculty member.

Undergraduate students who are more likely to experience sexual harassment are those aspiring to graduate studies and those who are economically disadvantaged. Faculty members are more likely to initiate acts of sexual harassment when they are the student's mentor, dissertation advisor, honors sponsor or employer (Rabinowitz 1990).

In general terms, studies on student-faculty informal interaction tend to focus on interactors, paying little attention to non-interactors. This study explores the differences between interactors and non-interactors, looking at variables such as gender, ethnicity, parental income, GPA, major and self-ratings. It also relates patterns of interaction and non-interaction with dynamics of social exclusion.

CHAPTER 4

NATIONAL PATTERNS OF UNDERGRADUATE STUDENT- FACULTY INFORMAL INTERACTION

4.1 Introduction

In order to look at patterns of informal interaction between students and faculty, the database of a major longitudinal study of university and college students in the United States was used. The particular survey providing the data for this study has been administered yearly to first year students since 1966, and followed up since 1982 in two and four year intervals (HERI 1992). The cohort selected for this thesis was the group of students who entered an institution of higher education in 1987. This included 290,000 entering first year students from over 560 two- and four- year colleges and universities across the United States (Dey et al. 1991). From this sample, just over 27,000 were sampled again in 1991. Weighting factors were applied to produce an adjusted set of national norms, which was then representative of the general population (see Chapter 2 for a discussion of the weighting procedure).

Fourteen involvement variables were analyzed in terms of six stratification variables. The strata considered in the study were gender, ethnicity, parental income, undergraduate GPA, and selected self-rated traits.³ These involvement variables were put into three classifications: type of interaction, satisfaction with interaction, and frequency of interaction.

³ For the results presented in the following tables, a self-rating of Below Average includes Below Average and Lowest 10%.

1. Type of interaction

Under type of interaction, four categories were established: (1) academic/intellectual, (2) social, (3) personal development/emotional, and (4) skills counseling/remedial (Table 4). Indeed, some interactions may fall into several categories. For example, being a guest in a professor's home may be both academic and social. However, for analytical purposes, these categories attempt to capture the main intent and impact of a particular type of interaction.

Table 4: Involvement variables by type of interaction

<i>Type of interaction</i>	<i>Involvement variable</i>
Academic/ Intellectual	(1) Worked on a professor's research project since entering college (2) Found faculty who provided intellectual challenge and stimulation since entering college;
Social	(1) Was a guest in a professor's home in the previous year;
Personal Development/ Emotional	(1) Had faculty take a personal interest in my progress since entering college; (2) Found faculty who provided emotional support and encouragement since entering college; (3) Found faculty who acted as a role model since entering college;
Program counseling/ Remedial	(1) Found faculty who provided advice and guidance about educational program since entering college; (2) Found faculty who provided tutorial assistance or help improving study skill since entering college; and (3) Found faculty who provided honest feedback about skills and abilities since entering college

II. Satisfaction with interaction

Three satisfaction variables were also studied. Students were asked to rate their satisfaction with the college they entered as first year students in the following statements as Very Satisfied, Satisfied, Neutral, Dissatisfied and Can't Rate/No Experience: (1) Opportunities to discuss coursework outside of class with professors; (2) Amount of contact with faculty and administrators; and (3) Ability to find a faculty or staff mentor.

III. Frequency of interaction

As well, two variables measuring the frequency of student-faculty informal interaction were explored: (1) Number of hours talking to high school teachers in a typical week during the last year of high school; and (2) Number of hours spent talking to faculty in a typical week during the previous year.

4.2 Types of student-faculty informal interaction: Findings

I. Academic/Intellectual

1. Worked on a professor's research project in the past year

Working on a professor's research project has been shown to be an important component of a student's undergraduate experience. Student research programs around the world recognize the many benefits of this type of interaction, including increased student satisfaction with their university experience, increased aspirations for graduate studies, and reduced time to complete graduate degrees.

In the cohort analyzed in this study, only 13% of senior students worked on a professor's research project since entering college. By gender, female students at 2-year institutions were least likely to have worked on a research project, while male students at 4-year institutions were most likely. Asian American students participated at twice the rate of other ethnic groups, and students with high and medium GPAs participated at a much greater rate than students with low GPAs. Students in Social Sciences and Engineering participated to a greater degree than students in Education, Health Professions, and Business. Students with a high self rating of their personal traits (as compared to others in their age group) were much more likely to have participated in a research project than students who have rated themselves as below average. There were no significant differences between parental income groups (Table 5).

2. Faculty member provided intellectual challenge and stimulation

Almost 90 per cent of senior students had found at least one faculty member who had provided them with intellectual challenge and stimulation since entering college. Those who attended 2 year institutions were less likely to have found any faculty member who challenged them, as were Black students, students with low parental income, low GPAs or low self-ratings (Table 6).

II. Social

1. Guest in a professor's home in the past year

Almost 25% of all students reported that they had been a guest in a professor's home in the last year, although students at four-year institutions were

more likely to be guests than students at two-year institutions. Other groups over-represented in this category included American Indians, Asian Americans, and those with a high parental income, high GPA, or high self-ratings. Black students were under-represented, as were those students with low GPAs, with a major of Business or Health professional, or with low self-ratings, especially in academic ability (Table 7).

III. Personal development/Emotional

1. Had faculty take personal interest in my progress

Forty-six per cent of all students by their senior year reported that faculty had taken a personal interest in their progress. A significant difference was found between students at two-year and four-year institutions, with students at four-year institutions more likely to have had a professor take interest in their progress. This was also more likely for students with high GPAs and high self-ratings, especially in public speaking. Students with a low self-rating in intellectual self-confidence and leadership ability were less likely to have had a faculty member show this type of interest in them. Students in Education and Social Science were more likely to have had faculty take a personal interest in them than students in Business, Engineering or Health Professional (Table 8).

2. Faculty provided emotional support and encouragement

Just over three-quarters of senior students had found at least one faculty member who provided them with emotional support and encouragement since entering college. This was especially true for females at 2-year institutions, and

least likely for males at 2-year institutions. Chicano and American Indian students were significantly more likely to receive emotional support from at least one faculty member than Black, White or Asian American students. Engineering students, and students with below average self-ratings in academic ability and drive to achieve were significantly less likely to have found a faculty member who encouraged them (Table 9).

3. A role model/someone to model yourself after

Approximately 70 per cent of senior students had found at least one faculty member who had provided a role model or someone to model themselves after. Male students were less likely to have found a role model than female students. Chicano students were most likely to have found a role model during their university years, as were students with high GPAs or students in Education. Students who had rated themselves in the top 10% of others their same age also were more likely to have found a faculty member to model themselves after than students who had rated themselves as below average (Table 10).

IV. Program counseling/Remedial

1. Faculty provided advice and guidance about educational program

Almost 94% of senior students had found at least one faculty member who provided advice and guidance about their educational program since entering college. Students with low GPAs or with low self-ratings of personal traits were less likely than other students to have found at least one faculty member who provided advice about their educational program (Table 11).

2. Faculty provided tutorial assistance or help improving study skills

Seventy per cent of senior students had found at least one faculty member who had provided tutorial assistance or help improving their study skills since entering college. In this category, those with a high GPA, and those with high self-ratings in academic ability, intellectual self-confidence, and writing ability all were less likely to have had a faculty member provide them with tutorial assistance or help improving study skills. Chicano students were much more likely to have received tutorial assistance than other ethnic groups (Table 12).

3. Faculty provided honest feedback about skills and abilities

Eighty-five per cent of senior students had found at least one faculty member who provided honest feedback about their skills and abilities since entering college. This was most likely for Chicano students, students with high GPAs, or students with a high self-rating in public speaking or leadership ability. Engineering students, and those with below average self-ratings were more likely to report not having found a faculty member who provided them with honest feedback (Table 13).

Table 5: Worked on professor's research project (%)

		No	Yes
Gender	Female - 4 yr institutions	91.1	8.9
	Male - 4 yr institutions	88.3	11.7
	Female - 2 yr institutions	86.5	13.5
	Male - 2 yr institutions	84.2	15.8
Ethnicity	White/Caucasian	87.2	12.8
	Black/African-American	86.5	13.5
	American Indian	85.9	14.1
	Asian-American	73.9	26.1
	Mexican-American/Chicano	89.4	10.6
Parental Income	Low	86.7	13.3
	Medium	88.0	12.0
	High	86.0	14.0
GPA	Low	91.0	9.0
	Medium	85.6	14.4
	High	76.0	24.0
Major	Business	92.2	7.8
	Education	92.8	7.2
	Engineering	82.2	17.8
	Health Professional	92.8	7.2
	Social Science	71.8	28.2
Self-rating: BA	Academic ability	93.3	6.7
	Competitiveness	88.7	11.3
	Drive to achieve	91.4	8.6
	Leadership ability	92.9	7.1
	Public speaking	92.0	8.0
	Intellectual self-confidence	95.0	5.0
	Writing ability	93.1	6.9
Self-rating: Top 10%	Academic ability	76.5	23.5
	Competitiveness	83.7	16.3
	Drive to achieve	83.0	17.0
	Leadership ability	85.2	14.8
	Public speaking	82.0	18.0
	Intellectual self-confidence	79.2	20.8
	Writing ability	81.7	18.3

Source: Compiled from CIRP data, 1987 & 1991.

Table 6: Since entering college, how many faculty have you found that provided intellectual challenge and stimulation (%)

		<i>None</i>	<i>One or more</i>
Gender	Female - 4 yr institutions	9.0	91.0
	Male - 4 yr institutions	7.1	92.9
	Female - 2 yr institutions	17.4	82.6
	Male - 2 yr institutions	12.3	87.7
Ethnicity	White/Caucasian	9.8	90.2
	Black/African-American	17.7	82.3
	American Indian	8.6	91.4
	Asian-American	11.1	88.9
	Mexican-American/Chicano	3.5	96.5
Parental Income	Low	16.4	83.6
	Medium	8.8	91.2
	High	8.3	91.7
GPA	Low	17.0	83.0
	Medium	7.1	92.9
	High	6.3	93.7
Major	Business	12.6	87.4
	Education	4.9	95.1
	Engineering	8.0	92.0
	Health Professional	15.8	84.2
	Social Science	9.2	90.8
Self-rating: BA	Academic ability	26.8	73.2
	Competitiveness	14.1	85.9
	Drive to achieve	16.3	83.7
	Leadership ability	21.8	78.2
	Public speaking	19.2	80.8
	Intellectual self-confidence	18.8	81.2
	Writing ability	18.6	81.4
Self-rating: Top 10%	Academic ability	4.8	95.2
	Competitiveness	5.3	94.7
	Drive to achieve	5.3	94.7
	Leadership ability	7.5	92.5
	Public speaking	9.7	90.3
	Intellectual self-confidence	4.8	95.2
	Writing ability	4.4	95.6

Source: Compiled from CIRP data, 1987 & 1991.

Table 7: Guest in professor's home (%)

		No	Yes
Gender	Female - 4 yr institutions	71.0	29.0
	Male - 4 yr institutions	71.8	28.2
	Female - 2 yr institutions	84.2	15.8
	Male - 2 yr institutions	84.3	15.7
Ethnicity	White/Caucasian	75.9	24.1
	Black/African-American	80.7	19.3
	American Indian	66.9	33.1
	Asian-American	68.8	31.2
	Mexican-American/Chicano	75.7	24.3
Parental Income	Low	80.7	19.3
	Medium	77.0	23.0
	High	71.0	29.0
Undergraduate GPA	Low	74.7	25.3
	Medium	72.1	27.9
	High	62.1	37.9
Major	Business	85.2	14.8
	Education	77.4	22.6
	Engineering	77.8	22.2
	Health Professional	84.0	16.0
	Social Sciences	71.7	28.3
Self-rating: BA	Academic ability	94.7	5.3
	Competitiveness	80.9	19.1
	Drive to achieve	88.6	11.4
	Leadership ability	84.1	15.9
	Public speaking	82.7	17.3
	Intellectual self-confidence	87.6	12.4
	Writing ability	81.7	18.3
Self-rating: Top 10%	Academic ability	67.6	32.4
	Competitiveness	71.9	28.1
	Drive to achieve	70.7	29.3
	Leadership ability	68.1	31.9
	Public speaking	66.4	33.6
	Intellectual self-confidence	67.0	33.0
	Writing ability	67.6	32.4

Source: Compiled from CIRP data, 1987 & 1991.

Table 8: Had faculty take personal interest in my progress (%)

		No	Yes
Gender	Female - 4 yr institutions	43.8	56.2
	Male - 4 yr institutions	49.5	50.5
	Female - 2 yr institutions	62.4	37.6
	Male - 2 yr institutions	72.2	27.8
Ethnicity	White/Caucasian	53.9	46.1
	Black/African-American	50.0	50.0
	American Indian	56.1	43.9
	Asian-American	65.8	34.2
	Mexican-American/Chicano	63.5	36.5
Parental Income	Low	56.7	43.3
	Medium	56.6	43.4
	High	47.8	52.2
GPA	Low	64.1	35.9
	Medium	49.8	50.2
	High	25.3	74.7
Major	Business	60.4	39.6
	Education	45.3	54.7
	Engineering	64.2	35.8
	Health Professional	64.0	36.0
	Social Science	49.1	50.9
Self-rating: BA	Academic ability	65.4	34.6
	Competitiveness	61.8	38.2
	Drive to achieve	70.9	29.1
	Leadership ability	74.0	26.0
	Public speaking	69.2	30.8
	Intellectual self-confidence	75.9	24.1
	Writing ability	70.5	29.5
Self-rating: Top 10%	Academic ability	38.2	61.8
	Competitiveness	48.0	52.0
	Drive to achieve	40.9	59.1
	Leadership ability	39.0	61.0
	Public speaking	29.1	70.9
	Intellectual self-confidence	36.6	63.4
	Writing ability	35.5	64.5

Source: Compiled from CIRP data, 1987 & 1991.

Table 9: Since entering college, how many faculty have you found that provided emotional support and encouragement (%)

		<i>None</i>	<i>One or more</i>
Gender	Female - 4 yr institutions	20.5	79.5
	Male - 4 yr institutions	25.1	74.9
	Female - 2 yr institutions	18.8	81.2
	Male - 2 yr institutions	30.6	69.4
Ethnicity	White/Caucasian	23.3	76.7
	Black/African-American	20.8	79.2
	American Indian	9.6	90.4
	Asian-American	26.3	73.7
	Mexican-American/Chicano	6.1	93.9
Parental Income	Low	25.6	74.4
	Medium	21.3	78.7
	High	25.4	74.6
GPA	Low	30.0	70.0
	Medium	20.3	79.7
	High	10.5	89.5
Major	Business	23.1	76.9
	Education	18.5	81.5
	Engineering	35.6	64.4
	Health Professional	21.1	78.9
	Social Science	21.2	78.8
Self-rating: BA	Academic ability	46.9	53.1
	Competitiveness	31.0	69.0
	Drive to achieve	42.1	57.9
	Leadership ability	24.5	75.5
	Public speaking	29.2	70.8
	Intellectual self-confidence	27.6	72.4
	Writing ability	29.7	70.3
Self-rating: Top 10%	Academic ability	20.0	80.0
	Competitiveness	21.3	78.7
	Drive to achieve	17.1	82.9
	Leadership ability	20.4	79.6
	Public speaking	23.6	76.4
	Intellectual self-confidence	22.8	77.2
	Writing ability	24.0	76.0

Source: Compiled from CIRP data, 1987 & 1991.

Table 10: Since entering college, how many faculty have you found that provided a role model/someone to model yourself after (%)

		None	One or more
Gender	Female - 4 yr institutions	22.8	77.2
	Male - 4 yr institutions	31.2	68.8
	Female - 2 yr institutions	22.6	77.4
	Male - 2 yr institutions	38.2	61.8
Ethnicity	White/Caucasian	28.2	71.8
	Black/African-American	30.8	69.2
	American Indian	32.8	67.2
	Asian-American	24.8	75.2
	Mexican-American/Chicano	17.7	82.3
Parental Income	Low	29.3	70.7
	Medium	26.2	73.8
	High	29.3	70.7
GPA	Low	40.2	59.8
	Medium	21.9	78.1
	High	15.6	84.4
Major	Business	23.8	76.2
	Education	20.0	80.0
	Engineering	28.9	71.1
	Health Professional	31.6	68.4
	Social Science	26.4	73.6
Self-rating: BA	Academic ability	38.6	61.4
	Competitiveness	34.1	65.9
	Drive to achieve	41.2	58.8
	Leadership ability	36.7	63.3
	Public speaking	39.2	60.8
	Intellectual self-confidence	38.0	62.0
Self-rating: Top 10%	Writing ability	37.9	62.1
	Academic ability	23.5	76.5
	Competitiveness	24.1	75.9
	Drive to achieve	20.5	79.5
	Leadership ability	19.7	80.3
	Public speaking	20.8	79.2
	Intellectual self-confidence	25.4	74.6
	Writing ability	24.9	75.1

Source: Compiled from CIRP data, 1987 & 1991.

Table 11: Since entering college, how many faculty have you found that provided advice and guidance about your educational program (%)

		<i>None</i>	<i>One or more</i>
Gender	Female - 4 yr institutions	5.8	94.2
	Male - 4 yr institutions	7.0	93.0
	Female - 2 yr institutions	3.5	96.5
	Male - 2 yr institutions	9.3	90.7
Ethnicity	White/Caucasian	6.1	93.9
	Black/African-American	9.1	90.9
	American Indian	4.8	95.2
	Asian-American	8.5	91.5
	Mexican-American/Chicano	2.2	97.8
Parental Income	Low	8.2	91.8
	Medium	5.7	94.3
	High	6.0	94.0
GPA	Low	10.3	89.7
	Medium	4.3	95.7
	High	2.2	97.8
Major	Business	6.5	93.5
	Education	2.9	97.1
	Engineering	4.4	95.6
	Health Professional	3.4	96.6
	Social Science	5.4	94.6
Self-rating: BA	Academic ability	17.8	82.2
	Competitiveness	12.8	87.2
	Drive to achieve	14.2	85.8
	Leadership ability	10.7	89.3
	Public speaking	10.9	89.1
	Intellectual self-confidence	7.9	92.1
	Writing ability	10.7	89.3
Self-rating: Top 10%	Academic ability	5.8	94.2
	Competitiveness	4.8	95.2
	Drive to achieve	4.6	95.4
	Leadership ability	4.8	95.2
	Public speaking	5.8	94.2
	Intellectual self-confidence	6.2	93.8
	Writing ability	6.0	94.0

Source: Compiled from CIRP data, 1987 & 1991.

Table 12: Since entering college, how many faculty have you found that provided tutorial assistance or help improving your study skills (%)

		None	One or more
Gender	Female - 4 yr institutions	29.1	70.9
	Male - 4 yr institutions	34.2	65.8
	Female - 2 yr institutions	26.1	73.9
	Male - 2 yr institutions	26.7	73.3
Ethnicity	White/Caucasian	30.6	69.4
	Black/African-American	26.6	73.4
	American Indian	32.0	68.0
	Asian-American	33.5	66.5
	Mexican-American/Chicano	12.7	87.3
Parental Income	Low	29.3	70.7
	Medium	28.9	71.1
	High	32.0	68.0
GPA	Low	29.3	70.7
	Medium	28.9	71.1
	High	35.3	64.7
Major	Business	27.8	72.2
	Education	32.9	67.1
	Engineering	29.3	70.7
	Health Professional	25.9	74.1
	Social Science	31.4	68.6
Self-rating: BA	Academic ability	26.3	73.7
	Competitiveness	38.5	61.5
	Drive to achieve	38.3	61.7
	Leadership ability	36.9	63.1
	Public speaking	30.3	69.7
	Intellectual self-confidence	30.3	69.7
	Writing ability	34.4	65.6
Self-rating: Top 10%	Academic ability	34.3	65.7
	Competitiveness	27.8	72.2
	Drive to achieve	28.0	72.0
	Leadership ability	23.7	76.3
	Public speaking	26.5	73.5
	Intellectual self-confidence	32.7	67.3
	Writing ability	40.9	59.1

Source: Compiled from CIRP data, 1987 & 1991.

Table 13: Since entering college, how many faculty have you found that provided honest feedback about your skills and abilities (%)

		None	One or more
Gender	Female - 4 yr institutions	13.0	87.0
	Male - 4 yr institutions	14.1	85.9
	Female - 2 yr institutions	15.0	85.0
	Male - 2 yr institutions	17.5	82.5
Ethnicity	White/Caucasian	14.9	85.1
	Black/African-American	14.2	85.8
	American Indian	12.5	87.5
	Asian-American	18.1	81.9
	Mexican-American/Chicano	4.6	95.4
Parental Income	Low	13.8	86.2
	Medium	13.7	86.3
	High	16.1	83.9
GPA	Low	19.2	80.8
	Medium	12.4	87.6
	High	5.4	94.6
Major	Business	13.4	86.6
	Education	16.2	83.8
	Engineering	25.8	74.2
	Health Professional	10.8	89.2
	Social Science	13.8	86.2
Self-rating: BA	Academic ability	30.3	69.7
	Competitiveness	19.1	80.9
	Drive to achieve	20.8	79.2
	Leadership ability	22.0	78.0
	Public speaking	20.3	79.7
	Intellectual self-confidence	24.7	75.3
Self-rating: Top 10%	Writing ability	24.0	76.0
	Academic ability	10.1	89.9
	Competitiveness	11.6	88.4
	Drive to achieve	10.2	89.8
	Leadership ability	8.6	91.4
	Public speaking	7.1	92.9
	Intellectual self-confidence	13.4	86.6
	Writing ability	16.3	83.7

Source: Compiled from CIRP data, 1987 & 1991.

4.3 Student satisfaction with informal faculty interaction: Findings

For the purpose of this study, I considered three measures of satisfaction with faculty contact: a) satisfaction with opportunities to discuss coursework outside of class with professors, b) satisfaction with the amount of contact with faculty and administrators, and c) satisfaction with the ability to find a faculty or staff mentor.

Interestingly, some groups who were dissatisfied with their opportunities to talk to professors were satisfied with the amount of contact they had with faculty. Conversely, some groups who were satisfied with their opportunities to talk to faculty were dissatisfied with their actual contact. Unfortunately, the types of interaction most preferred and actually engaged in were not requested on the CIRP survey.

1. Satisfaction with opportunities to discuss coursework outside of class with professors

Overall, just over 70% of senior students were satisfied or very satisfied with the opportunity to discuss coursework outside of class with professors. Ten percent of senior students were dissatisfied, and the remainder were neutral. Those dissatisfied were more likely to be American Indian, Chicano, and Black students, or those with a below average self-rating in academic ability. Students with high GPAs were most likely to be satisfied (Table 14).

2. Satisfaction with the amount of contact with faculty and administrators

Almost 60% were satisfied or very satisfied with the amount of contact they had with faculty and administrators, while almost 12% were dissatisfied. Those most likely to be dissatisfied were American Indian and Black students, or students with low self-ratings. Female students were slightly more satisfied than male students. Again, students with high GPAs or high self-ratings were most likely to be satisfied. Those with a below average self-rating in academic ability were most likely to be neutral about this statement (Table 15).

3. Satisfaction with the ability to find a faculty or staff mentor

Almost 60% of senior students were satisfied or very satisfied with their ability to find a mentor, while 14% were dissatisfied. Males at four year institutions were significantly more satisfied with the ability to find a mentor than male students at two year institutions. As well, Chicano students or students with a high GPA were much more likely to be satisfied than other students. American Indian and Black students, or those students with a below average self-rating in drive to achieve, intellectual self-confidence and academic ability were more likely to be dissatisfied. Students who rated themselves as below average in academic ability were most likely to be neutral (Table 16).

Table 14. Satisfaction with opportunities to discuss coursework outside of class with professors (does not include can't rate responses) (%)

		<i>D</i>	<i>N</i>	<i>S/VS</i>
Gender	Female - 4 yr institutions	N/A	N/A	75.5
	Male - 4 yr institutions	N/A	N/A	70.8
	Female - 2 yr institutions	N/A	N/A	72.9
	Male - 2 yr institutions	N/A	N/A	64.0
Ethnicity	White/Caucasian	9.3	18.3	72.4
	Black/African-American	14.9	18.6	66.5
	American Indian	19.0	10.6	70.4
	Asian-American	4.6	22.2	73.2
	Mexican-American/Chicano	17.9	6.0	76.1
Parental Income	Low	12.1	20.0	67.9
	Medium	7.6	18.0	74.4
	High	11.3	16.3	72.4
Undergraduate GPA	Low	13.6	22.4	64.0
	Medium	7.5	17.6	74.9
	High	8.6	9.4	82.0
Major	Business	7.9	22.7	69.4
	Education	9.5	13.4	77.1
	Engineering	11.6	20.4	68.0
	Health Professional	7.6	16.2	76.2
	Social Sciences	9.8	19.4	70.8
Self-rating: BA	Academic ability	30.5	31.9	37.6
	Competitiveness	16.4	17.0	66.6
	Drive to achieve	10.1	30.1	59.8
	Leadership ability	13.6	12.1	74.3
	Public speaking	13.3	20.0	66.7
	Intellectual self-confidence	17.7	18.1	64.2
	Writing ability	14.0	27.7	58.3
Self-rating: Top 10%	Academic ability	9.0	12.5	78.5
	Competitiveness	10.1	15.4	74.5
	Drive to achieve	9.6	12.5	77.9
	Leadership ability	9.5	15.5	75.0
	Public speaking	12.5	14.6	72.9
	Intellectual self-confidence	9.5	9.2	81.3
	Writing ability	10.8	12.0	77.2

Source: Compiled from CIRP data, 1987 & 1991.

Table 15. Satisfaction with amount of contact with faculty and administrators (does not include can't rate responses) (%)

		D	N	S/VS
Gender	Female - 4 yr institutions	N/A	N/A	60.9
	Male - 4 yr institutions	N/A	N/A	57.0
	Female - 2 yr institutions	N/A	N/A	55.4
	Male - 2 yr institutions	N/A	N/A	51.8
Ethnicity	White/Caucasian	11.7	29.9	58.4
	Black/African-American	15.8	36.2	48.0
	American Indian	17.6	35.7	46.7
	Asian-American	10.3	30.6	59.1
	Mexican-American/Chicano	3.5	52.3	44.2
Parental Income	Low	13.5	31.1	55.4
	Medium	9.8	33.9	56.3
	High	12.3	28.1	59.6
Undergraduate GPA	Low	14.0	37.9	48.1
	Medium	10.8	28.7	60.5
	High	9.5	14.9	75.6
Major	Business	10.2	35.5	54.3
	Education	9.4	30.7	59.9
	Engineering	15.9	27.9	56.2
	Health Professional	15.5	34.7	49.8
	Social Sciences	15.1	30.7	54.7
Self-rating: BA	Academic ability	19.2	61.4	19.4
	Competitiveness	20.4	28.9	50.7
	Drive to achieve	19.2	37.3	43.5
	Leadership ability	12.4	37.4	50.2
	Public speaking	13.5	34.0	52.5
	Intellectual self-confidence	23.5	36.0	40.5
Self-rating: Top 10%	Writing ability	16.1	36.8	47.1
	Academic ability	11.3	20.1	68.6
	Competitiveness	11.4	28.9	59.7
	Drive to achieve	12.0	22.9	65.1
	Leadership ability	12.5	25.1	62.4
	Public speaking	12.8	25.1	62.1
	Intellectual self-confidence	11.6	21.9	66.5
	Writing ability	11.9	24.1	64.0

Source: Compiled from CIRP data, 1987 & 1991.

Table 16. Satisfaction with ability to find a faculty or staff mentor (does not include can't rate responses) (%)

		D	N	S/VS
Gender	Female - 4 yr institutions	N/A	N/A	62.9
	Male - 4 yr institutions	N/A	N/A	60.1
	Female - 2 yr institutions	N/A	N/A	57.9
	Male - 2 yr institutions	N/A	N/A	49.6
Ethnicity	White/Caucasian	13.2	27.6	59.2
	Black/African-American	23.2	25.8	51.0
	American Indian	24.3	9.4	66.3
	Asian-American	15.0	29.4	55.6
	Mexican-American/Chicano	3.9	10.8	85.3
Parental Income	Low	14.8	29.2	56.0
	Medium	13.5	28.2	58.3
	High	13.2	24.2	62.6
Undergraduate GPA	Low	17.0	31.5	51.5
	Medium	12.6	25.8	61.6
	High	4.7	18.4	76.9
Major	Business	12.9	29.8	57.3
	Education	10.3	25.9	63.8
	Engineering	15.6	35.3	49.1
	Health Professional	14.5	27.5	58.0
	Social Sciences	14.9	27.5	57.6
Self-rating: BA	Academic ability	21.8	49.0	29.2
	Competitiveness	19.3	28.6	52.1
	Drive to achieve	23.0	27.7	49.3
	Leadership ability	15.7	26.8	57.5
	Public speaking	15.5	32.6	51.9
	Intellectual self-confidence	21.9	24.7	53.4
	Writing ability	18.5	33.0	48.5
Self-rating: Top 10%	Academic ability	12.9	17.8	69.3
	Competitiveness	15.4	23.6	61.0
	Drive to achieve	15.1	20.2	64.7
	Leadership ability	14.6	21.1	64.3
	Public speaking	14.0	22.2	63.8
	Intellectual self-confidence	14.3	17.1	68.6
	Writing ability	13.6	15.3	71.1

Source: Compiled from CIRP data, 1987 & 1991.

4.4 Frequency of student-faculty informal interaction: High school versus university

Students were asked to indicate the number of hours they spent talking to teachers in a typical week in their last year of high school, and to faculty in a typical week in the previous year. I organized the responses into three categories: non-interactors, low interactors (up to 2 hours) and high interactors (3 hours or more). In addition, the change in level of interaction between high school and post-secondary institution was analyzed.

1. Hours spent talking with high school teachers outside of class

Overall, seven percent of high school students did not interact with their teachers at all in the last year of high school, a great majority (68%) were low interactors, and almost a quarter were high interactors. Female students were much more likely to be high interactors than male students, while male students were more likely to be non-interactors. Among low interactors there were no major differences by gender. Asian American students were least likely to be high interactors, as well as those who rated themselves as below average in academic ability. Black students were most likely to be non-interactors, as were students who rated themselves below average in competitiveness. Looking at majors, the highest interactors in high school were students who would major in Education, while students who went on to major in Health Professional subjects were the least likely to be non-interactors (Table 17).

2. Hours spent talking with faculty outside of class

Senior students were asked to indicate the number of hours they spent talking to faculty in a typical week in the previous year. Overall, 20 percent were non-interactors (15% in four-year institutions and 30% in two-year institutions), 70 percent were low interactors, and ten percent were high interactors. Those students most likely to be non-interactors with faculty were females in two-year institutions, White and Black students, students with low or medium parental income, students with a low GPA, those majoring in Business, and those who rated themselves as below average. High interactors were predominately Black or Asian American, or those with high self-ratings of personal traits (Table 18).

Table 17: Hrs spent talking with teachers outside of class in last yr of high school (%)

		Non	Low	High
Gender	Female - 4 yr institutions	3.7	71.4	24.9
	Male - 4 yr institutions	10.2	72.2	17.6
	Female - 2 yr institutions	6.8	65.7	27.5
	Male - 2 yr institutions	8.8	72.7	18.5
Ethnicity	White/Caucasian	6.8	71.6	21.6
	Black/African-American	12.3	61.1	26.6
	American Indian	5.0	68.8	26.2
	Asian-American	7.8	80.4	11.8
	Mexican-American/Chicano	5.9	70.5	23.6
Parental Income	Low	7.3	70.5	22.2
	Medium	6.8	72.2	21.0
	High	7.0	69.0	24.0
Undergraduate GPA	Low	7.6	69.0	23.4
	Medium	7.1	71.3	21.6
	High	4.0	72.8	23.2
Average High School Grade	Low	11.2	76.0	12.8
	Medium	7.6	68.5	23.8
	High	3.1	72.4	24.5
Major	Business	9.1	73.7	17.2
	Education	5.2	65.6	29.2
	Engineering	9.1	76.1	14.8
	Health Professional	2.0	80.9	17.1
	Social Sciences	7.5	73.4	19.1
Self-rating: BA	Academic ability	5.3	86.6	8.1
	Competitiveness	10.6	70.3	19.1
	Drive to achieve	8.0	74.5	17.5
	Leadership ability	9.3	72.9	17.8
	Public speaking	8.0	75.8	16.2
Self-rating: Top 10%	Intellectual self-confidence	9.8	70.8	19.4
	Writing ability	8.8	72.9	18.3
	Academic ability	6.2	73.8	20.0
	Competitiveness	6.9	69.0	24.1
	Drive to achieve	6.1	69.2	24.7
	Leadership ability	5.2	65.2	29.6
	Public speaking	7.0	65.1	27.9
	Intellectual self-confidence	6.9	66.7	26.4
	Writing ability	6.2	65.5	28.3

Source: Compiled from CIRP data, 1987 & 1991.

Table 18: Hours spent talking to faculty outside of class in previous year (%)

		Non	Low	High
Gender	Female - 4 yr institutions	14.1	75.6	10.3
	Male - 4 yr institutions	16.2	70.9	12.9
	Female - 2 yr institutions	38.4	56.3	5.3
	Male - 2 yr institutions	20.4	67.6	12.0
Ethnicity	White/Caucasian	20.2	69.5	10.3
	Black/African-American	22.9	61.7	15.4
	American Indian	14.9	78.1	7.0
	Asian-American	13.8	73.1	13.1
Parental Income	Mexican-American/Chicano	14.4	79.1	6.5
	Low	24.2	67.4	8.4
	Medium	21.9	66.4	11.7
	High	16.5	73.4	10.1
Undergraduate GPA	Low	26.0	64.5	9.5
	Medium	17.1	72.0	10.9
	High	16.5	71.3	12.2
Average High School Grade	Low	25.0	63.5	11.6
	Medium	21.7	68.2	10.1
	High	13.7	75.5	10.8
Major	Business	24.8	68.9	6.3
	Education	8.4	85.4	6.2
	Engineering	10.6	78.7	10.7
	Health Professional	34.6	61.5	3.9
	Social Sciences	14.7	76.2	9.1
Self-rating: BA	Academic ability	43.6	55.0	1.4
	Competitiveness	32.0	62.0	6.0
	Drive to achieve	39.4	54.6	6.0
	Leadership ability	35.2	58.2	6.6
	Public speaking	32.0	62.9	5.1
	Intellectual self-confidence	42.8	55.6	1.6
	Writing ability	34.6	60.4	5.0
Self-rating: Top 10%	Academic ability	9.4	78.0	12.6
	Competitiveness	16.0	69.5	14.5
	Drive to achieve	14.1	69.7	16.7
	Leadership ability	17.8	66.7	15.5
	Public speaking	15.2	67.6	17.3
	Intellectual self-confidence	11.0	72.6	16.3
	Writing ability	15.9	72.3	11.8

Source: Compiled from CIRP data, 1987 & 1991.

When looking at the change in the level of interaction between high school and university, several interesting findings emerged. Overall, the percentage of non-interactors increased by 13.3 points. The greatest increases in the proportion of those groups who did not interact at all were: students with a low GPA (18.4); White students (13.4); students with low or medium levels of parental income (16.9 and 14.5 respectively); below average ratings in academic ability (38.3), competitiveness (21.4), drive to achieve (31.4), leadership ability (25.9), public speaking (24.0), intellectual self-confidence (33.0), and writing ability (25.8).

Average interaction rates were calculated by ethnicity, parental income, average undergraduate GPA (Table 19), and self-ratings (Table 20). On average, senior year students reduced their interaction with faculty by almost half when compared to their last year of high school: in high school the average was just over 2 hours a week, while in university it was 1 hours and 10 minutes per week. Several reasons could explain this: larger class sizes, larger institutional setting, or faculty not being as accessible or not as concerned with each individual student's progress.

Black students were the ethnic group that decreased interaction the most (almost 50 minutes per week). Asian American students did not show much change in their interaction levels between high school and university: their interaction level decreased on average by only 10 minutes per week. Chicano and American Indian students also showed a lower change in interaction level (35 and 37 minutes per week respectively).

Table 19: Average interaction with teachers and faculty by selected variables (hours/week)

	Interaction w/teachers avg hrs/wk ^a	Interaction w/faculty avg hrs/wk	Difference (hrs/wk)
Ethnicity			
Black	2.27	1.44	(0.83)
White	1.90	1.16	(0.74)
Chicano	2.01	1.38	(0.62)
American Ind	1.44	0.86	(0.58)
Asian-Amer	1.44	1.26	(0.18)
Low	3.22	1.01	(2.21)
Medium	1.94	1.16	(0.78)
High	1.98	1.22	(0.71)
GPA			
Low	2.21	1.13	(1.08)
Medium	1.95	1.19	(0.76)
High	2.25	1.37	(0.87)
Average	1.44	1.26	(0.18)
High School	2.04	1.14	(0.89)
Grade	2.53	1.20	(1.32)

Source: Compiled from CIRP data, 1987 & 1991.

^a Among those who interacted with teachers, a significantly higher than expected response corresponded to students who interacted with teachers 20 hours or more in a typical week. This may be attributed to anomalies in the data collection process, but it could also be an accurate representation of reality. Some hypotheses could be raised in order to attempt an explanation of this data, but they would remain at the speculative level. It would be more worthwhile to conduct further research into this response. Average interaction with teachers which may be affected by this anomaly are presented in italics.

With respect to self-ratings, students who rated themselves below average in all categories decreased interaction by between 35 and 55 minutes per week. Students who rated themselves in the top 10% in academic ability, competitiveness, and intellectual self-confidence decreased interaction by approximately 40 minutes per week. Students who rated themselves in the highest 10% in terms of writing ability decreased interaction by one hour.

Table 20: Average interaction with teachers and faculty by self-ratings (hours/week)

	Average Interaction w/teachers (hrs/wk ¹)	Average Interaction w/faculty (hrs/wk)	Difference (hrs/wk)
Self- Rating: BA	Academic ability	1.19	0.60 (0.58)
	Competitiveness	1.75	0.80 (0.95)
	Drive to achieve	1.82	0.91 (0.91)
	Leadership ability	1.77	0.87 (0.89)
	Public speaking ability	1.52	0.78 (0.74)
Self- Rating: Top 10%	Intellectual self- confidence	1.50	0.58 (0.93)
	Writing ability	1.53	0.77 (0.76)
	Academic ability	1.94	1.46 (0.60)
	Competitiveness	2.17	1.49 (0.69)
	Drive to achieve	2.23	1.55 (0.69)
	Leadership ability	3.05	1.46 (1.59)
	Public speaking ability	3.33	1.66 (1.67)
	Intellectual self- confidence	2.22	1.59 (0.63)
	Writing ability	2.27	1.27 (1.00)

Source: Compiled from CIRP data, 1987 & 1991.

¹ See note 4.

4.5 Concluding remarks.

Students who consistently appeared as high interactors in the 1987-1991 cohort were those with high GPAs and high self-ratings of their abilities. Indeed, in my own observations and conversations with faculty and teaching assistants, I found out that high achieving students with good grades were more frequently present at office hours and study sessions for examinations. While the causal effect of interaction on grades is not straightforward, it appears that these students are doubly benefiting. Not only were they more likely to be academically successful in the first place, but by interacting with faculty (and through the 'right' types of interaction) their chances of academic achievement increases even further. This does not mean that low achievers always interact less, but in general terms their interaction tends to be more concentrated on remedial activities or program counseling.

As was mentioned in the literature review, most studies of the effect of college on student outcomes have used as their sample White, traditional-age, full-time students attending four-year, residential institutions (Terenzini et al. 1996). However, as shown above, different groups of students interact at different rates and in different ways with faculty. This differential participation must be taken into consideration in further research, and more studies should be conducted which target under-represented groups in order to more fully understand the dynamics of student-faculty informal interaction.

CHAPTER 5

INSTITUTIONAL PROGRAMS AIMED AT PROMOTING STUDENT-FACULTY INFORMAL INTERACTION

This chapter presents four programs at the University of California, Los Angeles (UCLA) which deliberately try to promote student-faculty informal interaction. First, however, in order to provide a context for these programs, using similar data to that analyzed in Chapter 4, a summary of findings for UCLA are discussed.

5.1 The 1996 UCLA College Student Survey

In 1996, UCLA participated in the national College Student Survey (CSS) program administered by the Higher Education Research Institute (HERI). Questions similar to those found on the CIRP survey analyzed in the previous chapter were asked to undergraduates at all year levels. A low response rate (10%) meant that the response sample could not be considered a random sample of the entire undergraduate population, however it was judged to be reasonably representative in terms of class level and racial/ethnic composition. Other results serve more to signify an area which should be investigated further, rather than a definitive summary of undergraduate attitudes and opinions at this institution.

In comparison to other four-year institutions, UCLA undergraduates were far less likely to indicate that they felt the amount of contact they had with faculty was satisfactory or very satisfactory: 35.7% indicated satisfactory or very

satisfactory, compared to 70.2% at private universities and 66.0% at public four-year colleges. The same occurred with their ability to find a faculty or staff mentor: 37.8%, as compared to 69.9% at private universities and 64.4% at public four-year colleges. Similarly, they were less likely to have found faculty who provided them with encouragement for graduate school, opportunity to work on a research project, advice about their educational program, emotional support, assistance with study skills, intellectual challenge, and the opportunity to discuss coursework (Table 21). Compared to other four-year institutions, undergraduate students at UCLA were also less frequently a guest in a professor's home (15.3%, as compared to 24.3% private universities and 24.0% at public four-year colleges).

Table 21: Faculty assistance (UCLA 1996)

<i>Faculty frequently provided</i>	<i>UCLA</i>	<i>Private universities</i>	<i>Public 4-yr colleges</i>
Encouragement for grad/prof school	12.6	22.9	24.2
Oppty to work in research proj	6.4	14.8	18.7
Advice about program	7.0	23.0	23.2
Emotional support	7.6	19.2	18.1
Tutorial assistance	3.9	11.1	12.1
Honest feedback about abilities	14.4	35.4	31.5
Intellectual challenge	37.8	50.8	41.2
Oppty to discuss coursework	34.7	46.7	40.0

Source: CSS Institutional Summary (1996).

When examining interaction and ethnicity, it was found that Asian students, in spite of being the highest interactors in the Student Research Program analyzed later in this chapter, were the least likely to report that professors frequently provided them the opportunity to work on a research project. They were also the least likely to find faculty who frequently provided encouragement for graduate school, honest feedback about abilities, intellectual stimulation and the opportunity to discuss coursework (Table 22). White and Asian students were more likely to be a guest in a professor's home (17.2% and 15.2% respectively) than under-represented minorities (11.8% on average).

Table 22: Faculty assistance by ethnicity (UCLA 1996)

<i>Faculty frequently provided</i>	<i>Under-represented minorities</i>	<i>Asian</i>	<i>White</i>
Encouragement for grad/prof school	11.7	8.3	14.8
Oppty to work in research proj	6.2	1.5	8.4
Advice about program	4.1	4.5	8.9
Emotional support	5.6	6.1	8.9
Tutorial assistance	4.1	4.6	1.7
Honest feedback about abilities	13.8	8.4	15.2
Intellectual challenge	31.0	25.2	53.4
Oppty to discuss coursework	33.1	21.4	43.8

Source: CSS Institutional Summary (1996).

Some differences between lower level (first and second year) and upper level (third and fourth year) students were also noted. Upper level students more frequently than lower level students found professors who provided them with encouragement for graduate school, the opportunity to work on a research project,

advice about their educational program, intellectual challenge and the opportunity to discuss coursework. There were no differences between levels in finding a professor who frequently provided them emotional support, assistance with study skills, and honest feedback about abilities. In addition, upper level students (19.5%) were twice as often as lower level students (9.0%) to be guests in a professor's home.

5.2 Programs which encourage student-faculty informal interaction

Informal contact between undergraduate students and professors can be student-initiated or faculty-initiated, but it can also be propitiated by a program designed and implemented across campus. At UCLA, for instance, a variety of programs have been established to encourage student-faculty interaction outside the classroom. In this chapter, four of these programs are examined (Table 23).⁶ One program, entitled *Student Research Program* (SRP), helps undergraduates gain experience in research through active participation in a research project directed by a faculty member. The second program, the *Graduate Mentor Program Faculty Roundtables* (GMP), encourages students from underrepresented groups to continue on to graduate or professional school. The third program, under the suggestive title of *Dinner for 12 Strangers* (D12S), aims at increasing student satisfaction with their university experience through a social event (hosted by an

⁶ In order to improve student-faculty interaction with a focus on the efficient use of office hours, the College of Letters and Science Counseling Services has recently started to offer two academic success skills workshops: "Using Office Hours and Classroom Participation for Academic Success" and "How to Talk to your Professors and Teaching Assistants." Although these services were advertised in the student newspaper and in a flyer distributed to faculty and students, the first two workshops only attracted a handful of students. Due to this low enrollment and the infancy of the program, I decided not to include it in this chapter.

alumni), bringing together alumni, a faculty member and a group of undergraduate students. The last program, called *Faculty in Residence* (FIR), aims at helping students succeed at university by holding programs in on-campus residence halls.

Two main questions guide the analysis of these programs:

- a) How do programs which promote student-faculty informal interaction target and attract students?
- b) Which students are over- and under-represented in these programs?

Table 23: Summary of institutional programs examined

Program	# students (approx.)	# faculty (approx.)	Major focus/Goal	Run by	Type SFI	Frequency	Target Group
SFP	2000	750	to nurture the undergraduate student's intellectual life by example	admin/ faculty	academic	60-80 hours per quarter	All full-time undergraduate students in good academic standing; stipend competition offered to URM with minimum GPA of 2.5
GMP roundtables	200	30	to demystify the graduate school experience through informal interaction with faculty and graduate students	graduate students	inspirational	3 hours (one roundtable)	Primarily URM students interested in going to grad school
D12S	625	60	to provide an opportunity for student-alumni-faculty interaction and networking	alumni	social	4 hours (one dinner)	All students
FIR	6200	12	to increase students' chances of success at university	admin/ faculty	multiple	varies	Students living in on-campus residences

I. Student Research Program (SRP)

This program has been designed to integrate research into undergraduate education. It gives undergraduates the opportunity to work with faculty members in order to "enrich the intellectual life of undergraduates by providing research opportunities and one-on-one interaction with leading faculty ... and to broaden the talents and to increase the knowledge of the professional and academic leaders of the future." SRP was intended "to improve the quality of undergraduate education and increase the potential for students' academic success." It is also recognized as having potential to increase retention rates and to encourage a greater interest in graduate school (<http://www.college.ucla.edu/up/srp/>, July 1997).

The Student Research Program was started in 1985 with 90 students and 150 faculty. Ten years later, in 1995, there were 1,400 students and 750 faculty participating in more than 2,000 quarterly contracts (some students participate in more than one quarter). Today, more than 10,000 students have participated in the program. Eligibility for the program is restricted to full-time undergraduates in good academic standing. Additionally, three other requirements must be met: (1) students must attend a mandatory information meeting; (2) sign a learning contract with a professor committing to volunteer 8-10 hours a week to a project during the quarter; and (3) complete an evaluation form at the completion of their contract. If these requirements are met, the student receives a notation on their transcript as having participated in extra-curricular research.

The quality of SRP and related programs to encourage undergraduate participation in research projects has been recently recognized by the National Science Foundation. In 1997 the university was awarded one of 10 Recognition

Awards of the Integration of Research and Education. This \$500,000 award "acknowledges demonstrated leadership, innovation and achievement in developing programs institutionwide that integrate research and education activities" (Page 1997, 3).

According to SRP students, participating in SRP has many other benefits (SRP 1995; Gordon 1996, 1997a, 1997b; Page 1997). Many could not appreciate the scope of research until experiencing it, and now know what it means when professors are 'doing' their research. The experience also helped them to make more sense of lectures and coursework, learn to problem-solve and think more critically, and get a more complete perspective of the field. It has given them the opportunity to test other researchers' conclusions rather than accepting them as fact, and appreciate the importance of painstaking and methodologically rigorous research through experiencing long periods of tedium and subsequent euphoria from gaining new knowledge. Furthermore, participating in SRP means that they could go on to graduate school having already learned many of the techniques of research.

Many students who had never considered a career in research, or who are struggling to find their field of interest, found SRP helpful in helping them make rational decisions about whether or not to continue to graduate school. Many are exposed to areas which they didn't think about before, and some also got an opportunity to co-author papers and present at conferences. In some instances, students who had their own specific research interest have approached faculty members and, through participating in SRP, found that other students had also expressed an interest in that area.

Additionally, SRP has helped to break down real and perceived barriers between students and faculty, and given students the confidence to try new activities. Students have commented that it opened up their perspective and way of looking at the world, and that they became far more inquisitive in the research setting than in the classroom. Finally, getting involved in SRP has made their undergraduate experience more personal in a large institution such as UCLA.

There are many reasons why faculty participate in SRP (Gordon 1996, 1997a, 1997b; Page 1997). Many have a personal sense of responsibility, feeling it is important to expose undergraduates to research. They are motivated by the students' enthusiasm and curiosity, and benefit from seeing their research through the eyes of entering students. They see teaching research concepts to undergraduates as a way of helping them to think critically: "If they keep asking questions, it forces you to address everything in a fresh way" (cited in Page, 1/31/1997). They have noticed an increase in the grades and interest levels of students, and speculated that participating in research is often the most important part of a student's undergraduate career: "It's where students learn how to learn, rather than how to memorize, where they have to think and try to solve problems" (cited in Gordon 1/31/1997).

Administrators also have recognized the importance of involving undergraduates in research (Page 1997). They hope to have undergraduates leave UCLA with a good feeling about research and its value to society. As the provost of the College of Letters and Sciences expressed, "We know from hands-on experience that our projects make students more interested in the sciences, but we want to know how and why. For this purpose, part of the \$500,000 NSF award

mentioned above will be used to develop a formal assessment of how the discovery-based instruction benefits students, both in their studies at UCLA and in their long-term interest and careers" (cited by Page, Feb 28, 1997: 4).

Concerned that Ph.Ds. of color are still underrepresented, and that minority and low-income students were underrepresented students in SRP, the university developed a mechanism to encourage such participation: the Undergraduate Research Development Stipend (URDS). Originally, only students who were U.S. citizens and historically underrepresented within SRP were eligible to apply for the stipend of \$1,000 a quarter for two quarters, although these requirements have changed since.⁷ At that time, the underrepresented groups were Native American, African American, Filipino, Mexican American/Chicano, Latino/Other Spanish American, Japanese and Pacific Islander. The stipend program resulted in a dramatic increase in participation in SRP, not only because of the participation of the handful of stipend recipients, but also by the hundreds of students who did not receive stipends but, thanks to URSD, had the opportunity to learn about SRP. As Gordon (1996: 18) points out, these students who did not receive stipends "had their interest sufficiently piqued that they participated as a volunteer regardless". The impact of SRP on underrepresented groups has been significant. Indeed, it has been estimated that "the graduation rate among underrepresented students rises from 60% to 85% among those who participate in a research program at UCLA" (Page 1997: 4).

The most recent SRP statistics show that almost 2,000 contracts were completed by undergraduates in 1996/97. Female participation (51.2%) was

⁷ For 1996/97, students had to demonstrate financial hardship and have a GPA of at least 2.5. Underrepresented groups were especially encouraged to apply.

slightly higher than male (48.8%), and junior and senior (upper level) students (73.4%) completed almost three times as many contracts as first year and sophomore (lower level) students (26.6%). The number of contracts completed in Life Sciences (60.8%) was one and a half times greater than all the other disciplines combined. Compared to the general undergraduate population, this represents a significant overrepresentation, while the Social Sciences and Humanities are underrepresented.

By ethnicity, Asian students completed one half of all contracts and White students 30%. The next largest groups were Chicanos (4.3%), Pilipinos (4.3%), Latinos (3.7%), Blacks (3.1%), and American Indian (0.4%)⁸. Compared to the general population of undergraduates, this reflects an significant overrepresentation of Asian students and an underrepresentation of Chicano students. This is consistent with the national patterns of student groups who worked on a professor's research project found in the previous chapter.

Asian (85.3%), East Indian (84.5%) and Filipino (82.6%) students were much more likely to complete contracts in the Sciences and Engineering than Blacks (65.6%) or Chicanos (57.6%). In the Social Sciences, Chicano (21.2%) students were twice as likely to complete contracts as Black (9.8%) or Asian students (9.4%). In the Humanities, Chicano students (11.8%) were more likely to complete contracts than Blacks (8.2%) or Asians (2.4%).

Contracts completed by Honors students accounted for almost 30% of the total. Although upper level honors students (60.8%) completed one and a half more contracts than honors lower level students (39.2%), the percentage of lower level

⁸ The category "Other" accounted for 5.4% of all contracts.

students who were honors students and participated in SRP (41.4%) was significantly higher than higher level students (23.2%). Completion of contracts by honors students according to discipline was similar to that for non-honors students with the exception of the Social Sciences, where honor students participated at a significantly higher rate (16.6% honors, 10.9% non-honors). White honors students (40.8%) participated at a much higher rate than White non-honors students (25.7%), while conversely, Asian (42.2%) and Chicano (1.4%) honors students participated at a much lower rate than Asian (51.7%) and Chicano non-honors students (5.4%). Compared to the general population of honors undergraduate students, this represents an overrepresentation of Life Sciences and Asian students, and an underrepresentation of the Social Sciences and Humanities, and Chicano/Latino students. Additionally, women in honors were underrepresented.

The stipend seems to encourage some students to participate in SRP (probably those students who can resign from their jobs and use the stipend to offset the foregone income) but its absence does not seem to be a deterrent for a significant number of applicants: in 1996/97, of a total of 163 applicants, 31 received stipends, and of the 132 students who did not receive a stipend, 131 (all but one) participated in the program anyway. In other words, the motivation to participate and the expected rewards far exceeded the problems derived from the lack of stipend.

Stipend applicants tended to be female, sophomores or juniors, Black or Chicano/Latino, or from Social Sciences or Life Sciences. Compared to the representation of student groups by number of contracts completed for SRP, the

applicant group was overrepresented by Blacks, Chicanos/Latinos, sophomores, and those in Social Sciences or Humanities.

The average self-reported GPA of stipend recipients was 3.28 out of 4.00. Stipend recipients who had a brother or sister in college or university, or who had at least one parent graduate from university, had GPAs higher than those who did not. Similarly, those recipients who were employed also had higher GPAs than those who did not.

The success of SRP as a program which encourages student-faculty interaction outside of the classroom, benefiting students, faculty and the institution, is recognized worldwide. Representatives from many universities, including the University of Toronto, have visited the program in order to assess it for implementation at other institutions. Although certain groups are under-represented in the program, efforts are being made to address this. A challenge now is to get more contracts through the Social Sciences and Humanities, and to encourage faculty in these areas to integrate undergraduates into their research.

II. Graduate Mentor Program Faculty Roundtables

The Graduate Mentor Program (GMP) is part of an award-winning retention program serving more than 7,100 underrepresented, first-generation college and low-income undergraduates.⁹ Although GMP primarily serves these groups, it is also open to any student who is interested in attending graduate school.

⁹ GMP is part of a larger program called Academic Advancement Program (AAP) which was established in 1971. Its services include a rigorous academic summer program for entering students, counseling, tutoring, mentoring, a computer lab, and scholarships. On its webpage it is noted as being the "nation's largest and most successful undergraduate affirmative action program." Recently it was awarded the Retention Excellence Award by the Noel-Levitz National Center for Student Retention (Wolpert 1997).

This program was started in 1990 by a group of UCLA graduate students concerned that there was an underrepresentation of minority faculty in academia and professional schools (Yee 1997). It is completely run by graduate students and in 1996/97 had nine mentors who provided services to approximately 1,300 students, representing all disciplines. In addition to faculty roundtable discussions, the program includes counseling, workshops to prepare for the Graduate Record Exam (GRE), a letter of recommendation service, resource library, and advice on interacting with faculty.

The faculty roundtable discussions were designed to "demystify the graduate school experience through informal interaction with graduate students, faculty and selected guest speakers" (GMP mimeograph). The format of the faculty roundtables is informal and non-academic. Faculty participants are chosen on the recommendation of students and graduate mentors, and asked to talk for 10-12 minutes on one or more of the following topics: how and/or why they became an academic; any hurdles they may have had to overcome on the way to the Ph.D.; and the rewards and challenges of graduate study and an academic career in their discipline. Through personal stories about the way they overcame obstacles in life, or their love for their fields of study, professors become human beings, opening a new dimension for students. By portraying an image of 'real people', professors become achievable role models for students, who then may consider the pursuit of a graduate program as a feasible goal.

In 1996/97, eight roundtables were held: humanities, physical sciences and engineering, education, applied social science, sociology, life science, history and women of color. At the end of each roundtable, students were asked to complete a

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survey, indicating, among other things, why they attended and what they liked most about the session. Information regarding the attendance was not kept for every roundtable, however a total of 145 students completed the survey. These were approximately two-thirds female and one-third male. Almost 70% of the respondents were third year students or higher.

Survey respondents were made aware of the event through three main avenues. Finding out about the roundtable from a flyer or poster was indicated in 30% of the responses. Face-to-face invitations (through a GMP mentor, AAP tutor, friend or other person) or nonpersonal invitations (by letter, email or telephone call) were indicated in 70% of the responses.

The most frequent response as to the reason for attending was to find out more about grad school or career options, followed by the desire to hear what a particular professor had to say, learn more about the field, and general curiosity. Lower (first and second year) and upper level (third and fourth year) students differed in their reasons to attend. Lower year students primarily attended the roundtables to learn more about the field, while upper level students attended primarily to learn more about grad school and to listen to a particular professor.

Personal stories and openness of the professors were by far the most frequently reported responses to what the students liked most about the roundtables.

"When I listened to these professors speak from a personal perspective, I realized how much in common we have. It helps to know these people have failed and struggled because they are still successful intellectuals today. I have struggled as

well (even now), and these people have given me a sense that everything can be attained with some perseverance" (Male, Senior, History).

"We often consider professors as so much beyond us - - but it's nice to know that they have a lot of similar things in common with us" (Female, Sophomore, Sociology).

"I really liked the fact that they were honest and real about their lives and life struggles and especially the obstacles they faced. It helps me prepare to face whatever is ahead of me" (Female, Senior, Women of Color).

"They're real people" (Male, Sophomore, Life Science).

In addition to providing information about graduate school options, the roundtables also served to motivate and remotivate students in their majors:

"This was my first roundtable and it was great. It was so inspiring. It just reaffirmed by desire to pursue history in the academia. I'm really glad I came" (Female, Junior, History).

Judging from the exit surveys, these roundtables seemed to be a powerful medium for motivating and empowering students to continue onto graduate school and a career in academia. They certainly broke down perceived barriers between

students and faculty. Further research should be done to see if these students did indeed continue on to graduate school.

III. Dinners for 12 Strangers

The Dinner for 12 Strangers program is sponsored by both the Alumni Association of UCLA and the Student Alumni Association. This program was started in 1968 as a way for alumni, students, faculty and staff to "help make the university a friendlier place." Alumni volunteers host a dinner for twelve persons in their home, and students, faculty, staff and other alumni fill out a sign-up application to attend. The dinners are held in the winter quarter (usually in February and March), and the number of dinners is determined by the number of alumni who volunteer. It is advertised as an "opportunity not only to eat a free, home-cooked meal, but also to meet and make new friends." In addition to networking with alumni, students have the opportunity to talk to a professor outside of class and meet other students. In fact, faculty and staff presence are noted in the faculty invitation as "the key to the success of the program" and "the link between students and alumni". Besides providing an opportunity for a social gathering, the UCLA Alumni Association has also claimed that students who attended a dinner between 1975 and 1990 were twice as likely to join the Alumni Association as students who did not attend a dinner.

In 1997, 60 dinners were organized, with the participation of 604 undergraduate and 21 graduate students, 57 faculty and 132 alumni. In comparison to the general undergraduate population, the undergraduate participants were significantly overrepresented in Humanities and the Social Sciences, and

significantly underrepresented in Engineering, Arts, and Physical Science. In addition, lower level (first and second year students) were overrepresented and upper level students underrepresented (Table 24). Considering the demographics of the participants, faculty participants were significantly underrepresented by the Social Sciences and Life Sciences, and overrepresented by the Physical Sciences.

Table 24. Undergraduate participants in 1997 Dinners for 12 Strangers

	<i># of undergraduate students</i>	<i>% of general population</i>
Engineering	28	1.4
Arts	9	1.3
Theater, Film & TV	8	2.4
Humanities	74	3.1
Life Science	168	2.8
Physical Science	17	0.8
Social Science	236	3.6
Undeclared	51	1.5
Other	13	
Total	604	2.6
First year	120	3.2
Sophomore	150	3.4
Junior	149	2.1
Senior	172	2.1

Source: Compiled from data from the UCLA Alumni Association and the UCLA Office of Academic Planning and Budget.

Each student and alumni participant was asked to complete a survey about their Dinner for 12 Strangers experience, to which 222 students and 66 alumni responded (35.5% and 50% response rates respectively). Almost 85% of the respondents indicated that they enjoyed meeting a faculty member. Of the 15% who did not enjoy meeting a faculty member, the most frequent reasons given were that

the professor at their dinner was boring, not exciting, uninteresting, unfriendly or anti-social.

Although the majority of the students enjoyed meeting with a professor, the potential impact for faculty to motivate students academically and personally was not reached. According to my interviews, survey comments and personal observations, the gatherings are predominantly social, with low academic content. The academic impact is further hindered by the fact that dinners mix students from different disciplines together.¹⁰ The following statement by a history student summarizes the feelings of many students:

"I am a history major and the professor was a chemist. I enjoy science but I did not have a lot to talk about with her. I would have loved a history professor to talk to."

In contrast to UCLA undergraduate students who in the spring and summer of 1996 reported being a guest in a professor's home since entering college, this program attracted more first and second year students rather than students in higher levels (as compared to the general population). This program thus provides a good opportunity to motivate students earlier in their college experience through interaction with faculty, and has the potential to encourage them to interact more frequently in their subsequent years of university.

¹⁰ In contrast to this is UCLA's Graduate School of Education and Information Science's 'Dinner for 8 Educators' program. Although similar to 'Dinner for 12 Strangers,' this program brings together graduate students and faculty from the same discipline.

IV. Faculty-In-Residence

The Faculty-in-Residence program consists of twelve faculty members who live in student residences on campus. The faculty come from a variety of disciplines, and many of them are recognized as outstanding teachers and researchers. Their function is to interact with students in order to increase their chances of success at university. They promote programs and conversations on topics such as study skills, graduate school, using the internet, inter-group relations, academic topics, and hobbies such as eating sushi, acting/directing and sports. They also encourage students living in residence to meet faculty members in a variety of formal and informal situations.

In 1997, the UCLA Residential Life Quality and Satisfaction survey was distributed to over 6,200 students who lived in residences on campus, with a 42% response rate. Several questions regarding the faculty-in-residence program were asked, as well as questions on interaction with faculty in general. Specific data regarding these variables were requested in terms of gender, ethnicity, year of study and GPA level.

Just over three-quarters of the respondents were aware that some faculty live in residence to provide increased interaction and programming for students. Although over 80% of the students who responded felt that programs organized by the faculty-in-residence would be beneficial, and over 60% felt that more contact with faculty would help them academically, over 75% stated that they did not take advantage of the opportunity to interact with Faculty-in-Residence. Males (26.4%) were more likely to have interacted with Faculty-in-Residence than female students

(21.0%). Senior students (47.6%) were most likely to have interacted with Faculty-in-Residence while first year students (21.7%) were least likely.

Even though over 60% of the students felt that interacting with faculty would help them academically, only 10% met with faculty outside of class once a week or more. Women and students with lower GPAs were more likely than expected to feel that more contact with faculty would help them academically. Conversely, students with higher GPAs were less likely than expected to feel that more contact with faculty would help them academically. Chinese, Filipino or Korean students were more likely to agree that more contact with faculty would help them academically than White students.

Students were asked how often they spent time with faculty outside of class. In spite of living on-campus in close proximity to faculty offices, 41.2% reported never, 30.5% once a quarter, 18.2% twice a month, and 10.0% once a week or more. Students with higher GPAs (13%; low GPAs 4%) were more likely than expected to spend time with faculty outside of class and students with lower GPAs (45%; high GPAs 37%) more likely not to spend any time with faculty outside of class. First and second year students (26.5%) interacted with faculty twice a month or more at a rate less than expected, while junior/senior students (36.5%) interacted more than expected.

The success of the Faculty-in-Residence program depends very much on the faculty member involved. More in-depth analysis of each faculty-in-residence would certainly reveal valuable information regarding the impact of different types of programming and the different personality style of the professor involved. Moreover, asking a question on the survey instrument on the area of study of the

student could also result in some interesting correlations between discipline and degree of interaction.

5.4 Concluding Remarks

Each program described above aims at making the undergraduate student's university experience more rewarding. Two of the programs, the Student Research Program and the Graduate Mentor Program Faculty Roundtables, specifically target under-represented groups. All programs recognize the importance of student-faculty interaction, although the impact of this type of interaction may not be maximized in all.

The university also benefits by winning awards, improving public relations, attracting students and faculty, encouraging more alumni and community support, and developing models to be emulated by other institutions. Longitudinal research on the impact of these programs is greatly needed.

CHAPTER 6

SUMMARY AND CONCLUSIONS

6.1 Revisiting the Research Questions

This study explored the participation and non-participation of undergraduate student groups in different types of informal student-faculty interaction. This was done in the context of conflict theory which claims that not all student groups have access to the same opportunities in order to be successful in society, and that educational institutions, rather than reduce that gap, reinforce it. Three sets of research questions were posed at the beginning of the study:

1. What benefits (i.e. achievement, retention, etc.) do students gain from interacting informally with faculty?
2. What are the main characteristics of interactors and non-interactors in terms of socioeconomic status, ethnicity, gender, education, major and personal characteristics? How does this relationship change from high school to college?
3. How do programs which promote student-faculty informal interaction target and attract students? Which students do not participate in these programs ?

Question #1: Benefits

Regarding the first question, it was found that students gain multiple benefits from interacting informally with faculty during their college years. Students

have been shown gains in terms of academic or cognitive development, increases in intellectual orientation, liberalization of social and political values, growth in autonomy and independence, improvements in interpersonal skills, orientation toward scholarly careers, increases in persistence, and changes in occupational and educational values. Through this interaction, there have been noticeable changes in the maturity and personal development of students, as well as in a positive perception of intellectual growth. Among women, informal interaction with faculty has led to greater interest in male-dominated careers.

Although many studies have found a positive relationship between student-faculty informal interaction and student success variables, it is also apparent that different groups interact in different ways and end up with different benefits. This indicates that the type of interaction, as well as its frequency and other contextual factors, are important in measuring the impact of student contact with faculty outside the classroom.

Question #2: Interactors and non-interactors: General trends

In general terms, those students who are less likely to interact with professors during their undergraduate years at US colleges and universities are those with low grades, and those with below average personal self-ratings. These students, and particularly those with low self-ratings in academic ability, are also the least satisfied with their opportunities to discuss coursework outside of class with professors, with the amount of contact they had with them outside of class, and with their ability to find a mentor.

On the other hand, students with high GPAs and high personal self-ratings are the most likely to participate in a professor's research project, be a guest in a professor's home and have faculty take personal interest in their progress. These students are also more likely to find a mentor and a faculty member who provide them with emotional support than students with lower GPAs, and less likely to receive tutorial assistance from faculty members.

What this indicates is that students who are more likely to be successful in university are also the students who are benefiting from interaction with faculty. Those groups who are more at risk, are more often non- or low-interactors. In many cases, these are also the groups which are under-represented in university. The positive correlation between academic achievement and interaction, however, does not clearly establish a relation of causality. In other words, it is difficult to assess to what extent interaction follows achievement, or vice-versa. In any case, regardless of the relative weight of each effect, it is probably a two-way street in which the two variables feed each other. In a circular causation, high achievers interact more, and high-interactors achieve more. To identify which one came first equates to resolving the chicken-egg dilemma. The central point in terms of equality of opportunity is that low achievers, by being excluded (or self-excluded) from informal interaction, miss an excellent opportunity to reverse their situation, and hence the original gap between winners and losers is further increased.

The gap increase can be observed, for instance, when we follow students from high school to post-secondary institutions. The data presented in this study shows that the college experience does not seem to improve the interaction of the high school graduate: while the proportion of students who did not interact with

teachers in high school was only 7%, after four years of university the proportion increased to 20%. The situation is particularly detrimental for students who finish high school with lower grades and lower levels of intellectual and social self-confidence: the decrease in their level of interaction with faculty is three to ten times greater as compared to students with higher grades and self-esteem.

In terms of gender, there are important differences regarding the type of interaction students engage in. Male students tended to interact more frequently in academic interactions, and female students in emotional and remedial interactions. There was no significant difference by gender for social interactions. Female students were also generally more satisfied than male students in the opportunities to discuss coursework, in the amount of contact with faculty, and in the ability to find a mentor. Although female students interacted more frequently with teachers in high school, male students interacted more frequently with faculty in university. In terms of self-ratings, male students consistently rated themselves as above average or in the highest 10% more frequently than female students (HERI 1992). This is an important finding, considering that those with a high self-rating were more likely to be high interactors.

Results from this study also indicate that the student's major plays a significant role in the level and type of interaction. Of the five majors analyzed in this research (business, education, engineering, health professional and social sciences) it was found that students in social sciences and engineering were much more likely to have worked on a professor's research project than students in business, education or health professional. Social science, education and engineering students all were more likely to be a guest in a professor's home than

business and health professional students. Education students were more likely to have interacted with faculty in interactions which addressed personal development and emotional issues, and to have found a role model. They were also more likely to be high interactors with high school teachers in their last year of high school. Health professional and business students were more frequently non-interactors than education, engineering and social science students.

Likewise, ethnic groups participate at different rates in different types of interactions. For instance, Asian American students participated at a much higher rate in professor's research projects than White, Black, American Indian, and Chicano students. Along with American Indian students, they were also more frequently a guest in a professor's home. American Indian and Chicano students were more likely to have gained emotional support from faculty, and Chicano students were the most likely to have found a role model or had tutorial assistance, and to be satisfied or very satisfied with their ability to find a mentor. In terms of interaction with faculty, Black, Chicano and Asian all interacted on average more than White or American students.

Regarding socio-economic status, in general terms students with a high parental income were more likely interact with faculty than those students with low and medium parental income. Nevertheless, the socio-economic status of the students affected some types of interaction more than others. For instance, program counseling/remedial interactions were not significantly impacted by parental income. A different situation was observed in terms of academic/intellectual interactions, where a slight positive correlation between parental income and interaction was found. The most important effect of parental income on interaction

was felt in the social area: students with medium and high levels of parental income were more likely to be guests in a professor's home than students with low parental income.

It is interesting to note that 40% of UCLA's students in residence do not think that more contact with faculty would benefit them academically. Those who tend to hold this opinion are more likely to have high GPAs, to be males and to be Caucasians. Although the remaining 60% feel that interacting with faculty would help them academically, only 10% of them meet with them outside of class once a week or more. Given the close proximity of these students to faculty offices, living faraway from school is obviously not a factor to explain this discrepancy between words and actions. Moreover, and in spite of this close distance, the frequency of interaction for the residence students at UCLA is considerably lower than the national average, which includes commuters. This indicates an area for further investigation.

Question #3: Programs encouraging interaction

Most undergraduate students do not interact with faculty outside of the classroom very frequently. On the one hand, informal interaction with faculty at this level is primarily student-initiated, and undergraduate students (especially in the first years) usually lack the knowledge or the confidence to approach professors. On the other hand, professors are usually busy with other activities that are more recognized by the university reward system (mainly research and publications), and are more inclined to interact with (supposedly more intellectually challenging) graduate students. Since it is unlikely that student-faculty interaction will increase as

a result of a spontaneous initiative of either students or faculty, institutional programs which encourage this type of contact are probably the main avenue to greatly enhance a student's chance to meet professors.

Research shows that the earlier during their college years a student starts interacting with faculty, the more likely it becomes a regular occurrence. Thus, programs which attract first and second year students are more effective in encouraging undergraduate students to interact frequently and on a more regular basis with faculty than programs which focus on senior students. Among the four UCLA programs analyzed in this study, only one (Dinner for 12 Strangers) attract a majority of first and second year students. By targeting first year students, the other programs have potentially more opportunity to make a significant difference in the quality of the student's college experience.

By the same token, only the Graduate Mentor Faculty Roundtables, and to some extent the Student Research Program through its stipend program, specifically aim to increase the interaction of under-represented groups. Changes in eligibility criteria due to the passing of Proposition 209 may significantly affect the ability of these programs to target minority groups to increase their representation in research and graduate school. This is an area which needs to be closely monitored.

6.2. Final Remarks

This study examines a variety of issues regarding student-faculty informal interaction, with a focus on equality of opportunity for under-represented groups in higher education. It does not make the assumption that students live in a meritocracy, in which a fair distribution of success based on achievement exists.

Rather, it recognizes that different groups of undergraduate students benefit in different ways from student-faculty informal interaction, with the already advantaged groups increasing their structural position of advantage. Sometimes this differing impact is the result of planned intervention; at other times it is an unintended result of institutional and personal dynamics.

It is argued that, in studying informal student-faculty interaction, a multi-level approach should be considered. In this study, societal, institutional and individual factors were simultaneously addressed to provide a better understanding of the specific issue. To analyze these issues, it was relevant to address concepts such as social reproduction, hidden curriculum, habitus, cultural capital, field, and exclusion. Central to this approach is the examination of issues such as how different groups of students interact with faculty, why some groups are excluded from accessing resources necessary to succeed, and what the implications are in terms of benefits and disadvantages.

Furthermore, this research identifies the need for informal student-faculty interaction to be studied as a complex variable, taking into consideration not only frequency, type and impact of interaction, but also other factors such as dynamics between actors, timing, academic program, atmosphere of interaction, goals of participants, place, components of interaction, and institutional culture.

Several implications for professional and institutional practices arise from this study. First, in developing strategies to promote student-faculty informal interaction, it must be recognized that not all students have an equal opportunity to participate and benefit from it. Second, as there appears to be many benefits to students from interacting with faculty outside the classroom, interactions should be

encouraged early on in the student's university career. Third, an effort should be made to identify potential non-interactors in order to target them for participation in programs which encourage interaction with faculty.

However, this being said, the intensification of the academic workforce and a reward structure that favors publications in the first place and classroom teaching in the second, may leave interactions outside of the classroom as a bottom priority for faculty members (Schugurensky 1994). Hopefully as policy makers, university administrators and of course professors, become more aware of the relevance and the potential benefits of informal interaction between faculty and undergraduate students, mechanisms to promote this type of interaction will be built into the institutional structures.

There are at least six directions for further research. The first direction focuses on emerging technologies which are encouraging new types of informal interaction between students and faculty. Many students and faculty now interact through e-mail, virtual conferences and listserves. The impact of these non-personal versus face-to-face contacts for different groups is still largely unknown. A second direction relates to comparative studies looking at patterns of informal interaction and programs designed to encourage it in different countries. The third direction deals with the implementation of longitudinal research which would measure the impact of programs which have a student-faculty interaction component. Fourth is to investigate further the profile of those who comprise the group of students who rated themselves in the highest 10%, as this was the group that seemed to participate the most in student-faculty informal interaction. Fifth would be to investigate the interesting difference between awareness of students that interaction

with faculty would be beneficial academically, and the low levels of actual interaction. Last, but not least, it is important to conduct ethnographic studies which employ observation and in-depth interviewing to more fully understand this dynamic.

Many people's most memorable moments of their college years are the result of informal interactions with faculty. This dynamic is an important part of an undergraduate's university experience, and could have considerable impact on their professional and academic futures. Furthermore, any research which attempts to more fully understand this process benefits not only the student, but also the faculty, the institution and the community at large.

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Appendix 1: Definition of Terms

Freshman: First year university undergraduate student (see note 1)

High school grade: Low: C+ or less; Medium: B-, B, B+; High: A-, A, A+

Junior: Third year university undergraduate student

GPA: Low: B- or less; Medium: B, B+ or A-; High: A.

Major: The majors reported in this thesis are aggregated responses. Disaggregated categories are as follows:

Business: accounting; business administration (general); finance; marketing; management; secretarial studies; other business.

Education: business; elementary; music or art; physical education or recreation; secondary; special; other.

Engineering: aero- or astronautical; civil; chemical; electrical or electronic; industrial; mechanical; other.

Health professional: nursing; pharmacy; premedicine; predentistry; preveterinary; therapy (physical; occupational; speech).

Social sciences: anthropology; economics; ethnic studies; geography; psychology; social work; sociology; women's studies; other social sciences.

Parental income: Low parental income ranges from 0 to \$24,999; medium parental income \$25,000 to \$49,999; high parental income \$50,000 and above.

Senior: Fourth year or higher university undergraduate student

Sophomore: Second year university undergraduate student

Student-faculty informal interaction: any interaction outside of the classroom.